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SYMPOSIUM OF CANCER

(Summarizing the findings of the Joint Committee on Cancer of the Maricopa County Medical Society, St. Joseph's Hospital and the Good Samaritan Hospital, Phoenix, Ariz.

This Committee was organized in February, 1929, following the Regional Conference of the American College of Surgeons, held in Phoenix, in that month. The personnel of the Committee, as originally constituted, is as follows:

W. Warner Watkins, Chairman.
H. B. Gudgel, Vice-Chairman.
Joseph M. Greer, Secretary.
E. Payne Palmer.
Willard Smith.
George E. Goodrich.
H. T. Bailey.
H. P. Mills.
Victor Randolph.
Orville H. Brown.

This Committee was, thereafter, accepted by the County Medical Society and by each hospital Staff, as their standing Committee on Cancer.

This first report is a review of the cases of cancer treated in the two hospitals during the years 1928 and 1929, with a few of those treated early in 1930. It is simply an effort to record the methods of treatment, and does not pretend to offer any information about, or comments on, the end results which, obviously, must await further time.

Following this preliminary report, the Committee will attempt to evaluate the methods of treatment and to bring in recommendations which will tend to establish the advisable method in certain types, at least of malignant disease. This first report contains a list of the cancer cases treated in the two hospitals during the two years mentioned, and papers by the following members of the Committee:

"Theories of the Direct and Indirect Causes of Cancer and Principles of Treatment," by Dr. Orville H. Brown.

"Cancer in the Abdomen" (Exclusive of the Pelvis), by Dr. H. B. Gudgel.

"Cancer in Accessible Locations," by Dr. Joseph M. Greer.

"Uterine Cancer," by Dr. George E. Goodrich.

"Cancer of the Breast" by Dr. E. Payne Palmer.

SUMMARY OF CASES OF CANCER TREATED AT THE TWO PHOENIX HOSPITALS DURING THE YEARS 1928 AND 1929

CANCER OF THE CERVIX AND UTERUS

38 Cases

SJ—16149, 3-21-29. Mrs. M. G. H. (Palmer). M. 32 irreg. bleeding 3 mos. Third deg. involvement cervix and l. parametrium. Given 3250 mg.-hrs. radium and full course of x-ray. No visible lesion one year later.

SJ—16453, 12-3-29. Mrs. N. M. (Palmer). Hysterectomy in Apr., 1929, for fibroids; malig. lesion in vaginal scar. 800 Mg-hrs.. radium to scar; in April, 1930, ulcer still present (radium?).

SJ—18226, 1-13-30. Mrs. G. P. (Stroud). Second deg. involvement of cervical lip; panhysterectomy; path. report of adenocarcinoma.

SJ—17269, 7-23-29. Mrs. E. W. (Patterson). Early carc. of cervix. Hysterectomy. Path. report, probably early carcinoma.

SJ—16181, 3-20-29. A. T. (Palmer). S., age 38. Apparently first stage carcinoma of cervix; vaginal hysterectomy. Path. report, no malig. found.

SJ—18336, 12-15-29. V. R. (Stroud). Orange sized growth in cervix, apparently inoperable carcinoma. Palliative cauterization.

SJ—16135, 3-8-29. Mrs. M. O. (Ploussard). Col. M., age 43. Biopsy of cervix, non-malignant. After leaving hospital another section showed carcinoma. Cauterized with Percy cautery.

SJ—18558, 1-1-30. Mrs. D. K. (Shupe). Large, hard cervix, bleeding; amputation above growth. Path. report, sq. cell carcinoma. Death in May, 1930, from generalized carcinoma (autopsy).

SJ—15572, 1-24-29. Mrs. V. S. (Palmer). Second deg. squamous cell carcinoma of cervix. Amputation with endotherm knife followed immediately with radium, and then full series of x-ray.

SJ—17340, 7-31-29. Mrs. L. C. (Franklin). Age 52, tumor in uterine body thought to be fibroid. Hysterectomy. Path. report, carcinoma in cervix.

SJ—15354, 12-19-28. Mrs. S. J. (Shields). Age 47; Operation in California in October; Inoperable conditions found. Entered for palliative treatment with isamin blue.

SJ—15475, Jan., 1929. Mrs. C. M. (Goodrich). In course of urological examination, early carcinoma of cervix found. 3500 mg-hrs. radium given.

SJ—17305, D. R. (Patterson). M., age 56; recurrence of carcinoma after operation; given x-ray preparatory to radium. Did not remain for radium treatment. In August and September given second x-ray series.

SJ—15888, 2-26-29. Mrs. V. C. (Palmer). Third deg, involvement though claims to have had symptoms only two weeks. Full course x-ray; then 3250 mg-hrs. of radium. Later another series of x-ray in Albuquerque, where exploratory operation showed conditions good.

SJ—17705, 9-19-29. Mrs. O. W. (Milloy). In March, 1927, treated at another hospital for third deg. carcinoma, with radium and x-ray. Comes now in terminal stage. Autopsy, multiple metastases in abdomen and liver.

SJ—16579, 2-7-29. Mrs. J. L. (Shields). Seen in January; third degree involvement, given x-ray. Enters now for treatment with colloidal metals as palliative. In April, 1929, given radium and x-ray as palliation.

SJ—14779, 10-27-28. Mrs. G. H. (Dysart). Advanced third degree. X-rays outside, radium in hospital, 3600 mg-hrs. In Jan., 1929, marked improvement; second series of x-rays. Hopeless case.

SJ—17904, Oct., 1929. Mrs. L. H. (Watkins). First stage carcinoma of cervix, 3150 Mg.-hrs. radium, followed by x-ray.

SJ—18218, Dec., 1929. A. F. (Watkins). Advanced third degre carcinoma. 2000 mg.-hrs. radium, full series of x-ray.

SJ—18240, 12-26-29. Mrs. B. (Mills). Second deg. sq. cell carcinoma of cervix. 2000 Mg.-hrs. radium. Full series of x-ray.

SJ—13108, 2-14-28. Miss N. C. (Palmer). In Dec., 1927, third deg. carcinoma of cervix in 30 yr. old woman (single). X-ray. Now comes for radium in hospital for palliation in hopeless case. X-ray in April again. Died some months later.

SJ—16258x, 6-27-29. M. L. (Woodman). Third deg. carcinoma of cervix. 2000 mg.-hrs. radium, with full series of x-ray. Died Jan., 1930.

SJ—15333, 12-28-29. F. W. (Vivian). Has had radium for carcinoma of cervix; recurrence; destroyed by actual cautery, with full series of x-ray following.

SJ—15539, 1-8-29. Mrs. P. H. (Moeur). In Aug., 28, adv. third deg. carcinoma of cervix. Treated by x-ray then 3000 mg.-hrs. at G. S. Hosp. Now in St. Jos. Hosp. for x-ray palliative. Died March, 1929.

GS—5230, 5-3-29. Mrs. S. P. (Smith). Hysterectomy for fibroids; path. exam. showed sarcoma. Given x-ray treatment.

GS—4615, 12-11-28. Mrs. J. G. (Goodrich). Has had subtotal hysterectomy for condition not supposed to be malignant; recurrence in stump. 1250 mg.-hrs. of radium to lesion.

GS—5090, 2-16-29. Mrs. S. S. W. (Greer). Supravaginal for fibroids; carcinoma in stump. 3300 mg.-hrs. of radium, followed by full dose of x-ray.

GS—7317, 12-2-29. Mrs. H. B. (Shupe). Carcinoma of cervix; hysterectomy; path. report, adenocarcinoma.

GS—3894, 9-10-28. Mrs. L. N. (Vivian). Papillary carcinoma of body of uterus; hysterectomy; death six days later.

GS—6267, 7-12-29. Mrs. V. E. (Watkins). Adv. second deg. carcinoma of cervix and body. Preliminary x-ray; 3100 mg.-hrs. radium. Good condition in July, 1930.

GS—....., 9-18-29. Mrs. N. O. (Watkins). First stage cervical carcinoma. 3000 mg.-hrs. radium; no x-ray.

GS—6126 6-24-29. Mrs. S. G. (Mills). Large papillary growth on cervix; 2800 mg.-hrs. of radium; full course of x-ray; second series of x-ray in December; in June, 1930, radium to uterine body.

GS—4213, 11-24-28. Mrs. M. P. (Stroud). Carcinoma of cervix; cervix amputated and area cauterized.

GS—7738, 1-20-30. Mrs. R. L. (Woodman). M., age 34, adv. tuberculosis; third degree carcinoma of cervix, squ. cell. 3100 mg.-hrs. radium; did not return for x-ray.

GS—4300, 11-5-29. Mrs. C. M. (Brockway). Third deg. carcinoma extending upon vaginal vault. Full course of x-ray; 2000 mg.-hrs. of radium; could not find cervical canal.

GS—4295, Nov., 1929. Mrs. G. S. (Palmer). In March, 1926, when operating for appendicitis, advanced carcinoma of uterus found. 3000 mg.-hrs. of radium given then, with full course of x-ray. Now comes with some suspicion of induration in cervical stump; 1250 mg.-hrs. radium given to stump.

GS—5172, 2-21-29. Mrs. N. H. (Palmer). Curetted in 1928 for bleeding; recurrence in Jan., 1929, and exam. shows carcinoma. Full course of x-ray followed by 3400 mg.-hrs. of radium. In Sept., 1929, no sign of tumor or induratoin.

GS—5975, 6-6-29. Mrs. M. S. (Thomas). Persistent endocervicitis which does not yield to treatment; treated as carcinoma, without biopsy. 3000 mg.-hrs. of radium and full series of x-ray. In March, 1930, condition entirely satisfactory.

GS—3116, 5-21-28. Mrs. McC. (Ploussard). Terminal carcinoma; no treatment. Died.

CANCER IN PELVIC ORGANS OTHER THAN UTERUS

(Ovaries, Bladder, Prostate, Rectum) 21 Cases.

GS—4075, 10-6-28. Mrs. L. D. (McIntyre). Young woman with ovarian cysts; operated; recurrence; x-ray treatments. Died.

SJ—16046, 2-23-29. Mrs. J. T. (Sweek). Adenocarcinoma ovary; partial removal; x-ray treatments. Died, June, 1929.

SJ—14777, Mch., 1930. Mrs. G. A. P. (Ploussard). Operated Oct., 1928 for cyst-adeno-carcinoma of ovary; returned March, 1930, with pelvic mass; exploratory; sent for x-ray treatment. Died.

SJ—17541, 8-27-29. M. K. (Goodrich). Subtotal hysterectomy in Aug., 1929; large multilocular cyst; path. report non-malig. Recurred and operated in Dec., 1929; general pelvic and abdominal carcinoma.

SJ—17334, 7-31-29. Mrs. K. F. (Sweek). Ovariotomy, suspected carcinoma; path. report carcinoma in early stage.

GS—6685, 9-10-29. Mrs. H. S. (Smith). Inoperable carcinoma of ovary and adnexa. Died month later.

SJ—13185, 3-7-28. Miss A. M. (Patterson). Cystadenoma of ovary.

SJ—16571, 4-22-29. Mrs. J. F. (Palmer). M., age 44; tumor of ovary removed; adenocarcinoma.

SJ—15166, 12-14-28. Mrs. M. H. (Shields). In Nov., 1927 had inoper. carc. of colon, uterus and ileum; colostomy; enters now for isamin-blue palliative treatment. Died Jan., 1929.

SJ—15446, 12-25-28. G. W. S. (Vivian). M., age 57; enl. prostate. Second entry Jan. 3, 1929, diagnosis of carcinoma of prosta te. No operative chart or tissue report.

SJ—17673, 9-11-29. S. R. (Thayer). W., age 74; operated for fibroids; found inoperable carcinoma of bladder. Died month later.

SJ—18032, 10-6-29. L. S. (Patterson). M., age 53, adv. carc. of prostate and bladder. Died.

SJ—18714, 12-17-29. J. B. (Sweek). W., age 61; carcinoma of prostate; removed; postoperative x-ray. Good condition in June, 1930.

SJ—13805, 65-8-28. J. H. B. (Pearson). Cancer of prostate with bone metastases; no treatment; died.

GS—2129, 1-6-28. A. S. (Brown). Cancer of prostate with metastases; autopsy elsewhere (Pueblo, Colo.).

GS—4386, 11-16-28. J. S. (Vivian). Cancer of bladder with ext. bone metastases; autopsy.

GS—3188, 5-30-28. S. S. (Vivian). Carcinoma of bladder; no data in records confirming this diagnosis.

GS—4282, 11-2-28. L. L. F. (Vivian). Cancer of bladder; biopsy.

SJ—14372, 8-30-28. H. R. (Vivian). Cancer of prostate; punch specimen. No record of treatment.

SJ—14567, 9-18-28. W. J. H. (Vivian). Carcinoma arising from pelvis; colostomy; died Oct., 1928; no autopsy.

GS—5813, 5-13-29. A. E. H. (Goodrich). Carcinoma of rectum; three stage Kraske; good condition in July, 1930.

CANCER IN THE ABDOMEN OTHER THAN UTERUS AND PELVIS

29 Cases.

SJ—17039, 5-6-29. (Ellis). S., age 55, carcinoma of sigmoid. No operation.

SJ—15574, 1-7-29. J. C. C. (Palmer). Carcinoma descending colon; cecostomy; resection; died.

SJ—13890. Mrs. K. M. (Bannister). M., age 58, loss of wt., constipation, pain, mass in culdesac, x-ray; exploratory; inoper. carc. of sigmoid.

SJ—17067, 7-2-29. Mrs. L. F. (Fournier). Age 47, pain and mass in rt. side, constipation; lesion in splenic flexure; colostomy.

SJ—16404, 4-3-29. A. F. (Greer). Cancer of stomach. Died April 23.

SJ—15870, 2-5-29. Mrs. M. T. (Sult). Carcinoma of stomach by x-ray. Died Feb. 28.

SJ—13397 11-24-28. Mrs. E. C. (Sult). Ext. carc. of stomach; palliative x-ray treatment; autopsy confirms.

SJ—15819, 2-16-29. M. L. (McCall). Carc. of stomach by x-ray. Died Feb. 22.

SJ—14983, 11-16-28. M. T. (Tuthill). S., age 38; symptoms for four years; x-ray diagnosis. Operation, hard irregular mass at pylorus; posterior gastro-enterostomy.

SJ—13687, 5-21-28. I. Q. (Brockway). Cancer of pylorus (x-ray).

GS—4136. H. C. (Goodrich). Carcinoma of stomach; posterior gastro-enterostomy.

SJ—14775, 9-24-28. T. W. P. (Vivian). M., age 52; diagnosis of carcinoma of stomach noted; no symptoms noted to support; dyspnea, cyanosis, anasarca, rapid heart; no x-ray.

SJ—13840, 6-11-28. C. Y. (Milloy). Difficulty in in swallowing; x-ray negative. Autopsy showed advanced carcinoma of fundus of stomach.

GS—7472, 12-20-29. J. T. W. (Gatterdam). Carcinoma of stomach; no x-ray or other evidence on record to substantiate.

GS—5993, 6-6-29. Mrs. M. T. (Shupe). Exploratory; cancer stomach involving liver; died June 19.

GS—7269, 11-23-29. Mrs. J. M. (Goodrich). Carcinoma of stomach (x-ray); resection; died Nov. 28.

GS—5255, 3-4-29. Mrs. R. G. (?) Adenocarcinoma of kidney; nephrectomy.

SJ—13360, 4-5-28. C. K. (Woodman). Carcinoma of liver. Died Apr. 9; no autopsy.

GS—5624, 4-29-29. C. H. S. (C. B. Palmer). Jaundice; nosebleed; diag. cancer of liver; died May 1; no autopsy.

GS—5105, 2-12-29. C. K. (Ellis). Mass in liver region; diagnosis, cancer of liver; died Feb. 15; no autopsy.

GS—5147, 2-18-29. L. C. (Hughes). Enlarged liver; ascites; diagnosis cancer of liver; no autopsy.

GS3944, 9-18-29. G. T. (Vivian). Enlarged liver, icterus; diagnosis, cancer of liver; not confirmed.

GS—7353, 12-6-28. Mrs. W. S. (Wilkinson). Diagnosis cancer of gall bladder; history and x-ray indicates serious pathology in bile tract; no operation.

SJ—14086, 7-11-28. Mrs. H. K. F. (Drane). Diagnosis cancer of the liver; no x-ray or autopsy.

SJ—17933, 10-25-29. K. F. (Barlow). M., age 59; hard mass in gall bladder area; exploratory; biopsy; path. report fibrous tissue; died; no autopsy; final diagnosis, carcinoma of gall bladder.

GS—4451, 12-5-28. R. A. H. (Felch). Cancer of urinary and gall-bladder systems; no recorded findings to confirm.

GS—7483, 12-21-29. J. C. P. (Little). Thyroid tumor removed in August, 1829; now has mass in lower left abdomen; another in inguinal region. No operation.

GS—6266, 7-12-29. Mrs. N. W. C. (Hicks). Cancer in abdomen; tuberculosis; diagnosis of cancer not confirmed by records.

CANCER OF THE BREAST

18 Cases

SJ—17055 1-18-30. Mrs. N. B. (Hughes). Carcinoma en cuirass in terminal stage; has been given two series of x-ray; no benefit; died day of entrance.

SJ—17420, 8-15-29. Mrs. T. B. (Palmer). W., age 69; carcinoma right breast; radical operation; path. report, Paget's.

SJ—16889, 5-27-29. Mrs. E. T. (Palmer). Lump in L. breast for two years; borderline; preoperative x-ray; radical with electrotome.

SJ—13892, 6-19-28. Mrs. C. F. (Brockway). Age 70; cancer of breast with metastases to lung and pleura; no treatment.

SJ—14823 10-26-28. K. D. (Craig). Age 34; lump in breast for 2 mos.; Halstead resection; alveolar carcinoma with gland involv. Postoperative x-ray; early in 1930 other breast removed by Dr. Dysart for cancer.

SJ—15628, 1-29-29. Mrs. L. F. (Palmer). Tumor in R. breast 3 mos. Removed and sectioned; path. report, adenofibroma.

SJ—14016, 7-1-28. Mrs. C. S. (Vivian). Lump in breast; Halstead resection; path. report adenocarcinoma; postoperative x-ray; early in 1930 recurrence in scar treated by x-ray.

SJ—18254, 11-29-29. Mrs. S. L. (Palmer). Tu-

mor in upper and external quadrant, firm, fixed to skin and muscle. Preoperative x-ray and Rodman operation; adenocarcinoma; postoperative x-ray advised.

SJ—18880, 1-30-30. Mrs. S. M. (Palmer). Firm, nodular growth in L. breast; some gland involv. Rodman amputation; alveolar carcinoma with skin involvement; postoperative x-ray.

GS—5001 1-30-29. Miss R. B. (Smith). Lump in L. breast; radical; path. report non-malignant; postoperative x-ray.

GS—7049, 10-29-29. Mrs. S. B. (Goodrich). Lump in R. breast; radical; path. report carcinoma; postoperative x-ray.

GS—4619, 12-12-28. Mrs. L. W. (Tuthill). Lump in L. breast; preoperative x-ray; Halstead amputation.

GS—4343, 1-11-28. Mrs. F. S. (Goodrich). Lump in R. breast for 3 yrs. Radical amputtaion; adenocarcinoma. Recurrence in Nov., 1929 in axilla and scar; x-ray treatments.

GS— Nov., 1929. Mrs. V. S. B. (Goodrich). Breast amputation for carcinoma. Postoperative x-ray.

GS—3720, 8-16-28. Miss L. K. (Tuthill). Lump in L. breast for 3 yrs. Nodule removed and sectioned, showing adenocarcinoma; radical amputation.

GS—6033, 6-12-29. H. E. (?) Small nodule removed from breast and sectioned; non-malignant.

GS—6871, 10-8-29. Miss E. R. (Brown). Breast removed in St. Louis a year ago; now has extensive bone metastases; palliative x-ray.

GS—2768, Apr., 1928. Mrs. K. R. (Pearson). Tumor first appeared in May, 1927; axillary glands involved; breast removed; scirrhus carcinoma.

MALIGNANCIES IN ACCESSIBLE LOCATIONS
19 Cases.

SJ—14443, 9-9-28. C. E. (Palmer). Swelling on forehead where struck 2 mos. ago. Preoperative x-ray; partial removal; path. report endothelioma; died Nov., 1928.

SJ—13986, 4-27-28. T. B. H. (Craig). Diagnosis of sarcomatosis of lower extremities; record not definite.

SJ—14244, 8-8-29. J. H. (Dysart). Carcinoma glans penis; amputation; path. report squamous cell carcinoma; postoperative x-ray.

GS—6697, 9-12-29. C. A. (Shupe). Tumor L. axilla; operative removal; path. report, round cell sarcoma; autopsy shows rib involvement.

GS—6882, 10-9-29. C. R. (Shupe). Tumor under L. ear, diagnosis carcinoma; removed; path. report inflammatory.

GS—4299, 11-5-28. C. F. G. (Hawley). Cancer of lip. No treatment.

GS—6756, Aug., 1929. Mrs. R. C. M. (Watkins). Carcinoma about orbit; x-ray treatment; enucleation of eye (Dr. Schwartz). Well in May, 1930.

GS—4015, Nov., 1929. Mrs. C. G. D. (Watkins). Electrosurgical removal of old epithelioma under eye in connection with x-ray and radium treatment.

GS—2575, Mch., 1928. S. T. H. (Tuthill). Removal of pinna with cautery knife for carcinoma; x-ray treatment.

GS—2192, S. L. G. (Sweek). Tumor right side of neck removed Sept., 1927; adenocarcinoma; x-ray treatments; recurrence; this time for second removal and radiation; later third operation in St. J. (Apr., 1928). Died in 1929.

SJ—18153, 11-26-29. W. I. B. (Thomas). Degenerated mole on back removed in 1928 by x-ray, apparently successful; now comes with diagnosis of metastases in internal organs; died in hospital; not certain of diagnosis.

SJ—16694. L. S. W. (Palmer). Cancer lower lip; excision and gland removal; postoperative x-ray.

SJ—15675, 5-12-29. J. W. (Palmer). Squamous cell carc. lower lip; excision and gland removal; postoperative x-ray.

SJ—17215, 12-12-29. M. C. B. (Palmer). Cancer of lower lip developing on lupus; electrosurgical removal; x-ray; recurrence; caustic paste in Los Angeles; second entry for repair of paste damage to lip.

SJ—15060, 12-2-28. W. C. (Vivian). Cancer of foreskin; excision with electrotome; squamous cell carcinoma.

SJ—17235, 7-8-29. N. D. (Ploussard). Adv. carcinoma of hand in old man; amputation in mid forearm. Squamous cell carcinoma.

SJ—14571, 10-1-28. M. W. (Brockway). Growth size of egg removed; does not state where; path. report basal cell carcinoma.

SJ—14472, 9-18-29. M. J. (Ploussard). Old Bartholin gland infection; labiae thickened; tissue removed; squamous cell carcinoma.

SJ—16231, 3-30-29. H. C. P. (Dysart). Carcinoma of tongue; radium; excision; gland dissection; x-ray; died in summer of 1929.

THEORIES OF THE DIRECT AND INDIRECT CAUSES OF CANCER
and
PRINCIPLES OF TREATMENT

ORVILLE HARRY BROWN, M. D., Ph. D.
Phoenix, Ariz.

The earliest medical writings describe cancer. Hippocrates collected many writings on the subject. At that time it was regarded as a humoral disorder, either deficient or excessive amounts of blood, mucus, bile, etc. As would be expected, the term cancer was applied to swellings and growths now known to be merely inflammation.

History records that Democedes (520 B. C.) cured Atossa, wife of Darius Hystaspis, of breast cancer. Celsus removed the breasts for cancer and advised against removal of the pectoralis major.

Galen (131-203 A. D.) used the humoral pathology theory of cancer by saying that it developed from a concentration of black bile; suppression of the menses and hemorrhoids prevented discharge of black bile and led to cancer.

These early writers recognized that diet might play a part in cancer and recommended a vegetable diet for cancer patients and one writer absolutely forbade the eating of walnuts.

An interesting observation is that Leonides of Alexandria (180 A. D.) described radical operation for breast cancer, cutting through healthy tissue with knife and cautery, approaching closely modern technic.

For a thousand years throughout the Dark

Ages the development in cancer, as in other scientific works, was practically nil.

Lanfranchi (1290) again urged the radical operation for cancer, encouraging free bleeding of the affected parts. Henri De Mondeville and Guy de Chaulliac excised cancers and used caustic arsenic on many.

Paracelsus, in the seventeenth century, advanced a theory that the causes of cancer were mineral salts in the blood and that the tumor was a collection of the salts of the blood attempting to be eliminated from the body.

Sennert of Prag, and Lusitanus of Lisbon, in the seventeenth century, advanced the theory that cancer was contagious.

DeDran, in the eighteenth century, first advanced the theory that "cancer lymph" getting through adjacent nodes might contaminate the entire lymph chain.

Morgani, in the eighteenth century, established pathologic anatomy and advanced the knowledge of tumors, separating many benign from malignant tumors.

Peyrilhe advanced cancer research, in the latter part of the eighteenth century, by a notable essay on "What is Cancer?" He discussed the origin of the tumor, the nature of the disease, the manner of growth and the treatment. He thought there was a specific virus formed from the degeneration which was responsible for the cachexia.

Helmont and Ettmuller said, in the seventeenth century, that an excess of acid was believed to be the cause of cancer and it was treated by the use of alkalies.

About this time Stahl advanced the theory that stasis and thickening of the blood were responsible for the development of cancer.

Hoffman believed that cancer and other types of diseases followed from atony, stasis and abnormal fermentation of blood and lymph.

John Hunter recognized that cancer tissue grew by transplantation; i. e., by metastases.

In 1802 the Society for the Investigation of the Nature and Causes of Cancer was formed in London. It dissolved, however, in 1806, without having accomplished anything of note.

Bayle and Cayol advanced the theory of the constitutional nature of cancer.

Broussais early in the nineteenth century suggested that cancer comes from recurrent inflammation, and is only inflamed tissue.

Cruveilhier held that cancer is a malignant degeneration of tissue.

Raspail (1826) demonstrated that the growth of cancer was by a multiplication of cells.

J. Muller advanced the theory that cancer came from certain cells known as germ cells capable of wild development distributed among normal cells.

Hannover believed that cancer cells circulated in the blood and produced metastases as pus cells produce pyemia.

Virchow supported the contention of Muller regarding cancer production. About the time of Virchow the theory that cancer came from fluid blastema became prevalent and there was much controversy over it. Rokotansky said cancer was a constitutional dyscrasia. Virchow wrongly advanced the theory that the mesoblastic cell was the essential source of cell cancer.

Through the work of Cruveillheir, Hemak, Thiersch, Meckle, Waldeyer, Recklinghausen, Koster and Carmalt it became established that the type of cancer depended upon the tissue from which it developed.

In 1877, Cohnheim formulated a doctrine that cancer arose mainly from isolated and generally embryologic cells and tissue rests lying within normal tissue.

Ewing says that the fact that cancer has been demonstrated to be a disease local in origin and that secondary tumors arise from cells transported from the primary tumor tends to disprove the theory of cancerous dyscrasia and certainly casts doubt upon the theories of parasitic causes of cancer; cellular pathology seems to be incapable of explaining the etiology of cancer; irritation, trauma and infections have seemed to be connected with the origin of cancer but their relation to it has not been fully recognized or explained.

The latter decade of the last century dealt with pathology of tumors, separation of varieties, elucidation of fine points in the histogenesis and discussion of the history of neoplasms.

The outstanding development of the early part of the twentieth century has been on tumors throughout the animal kingdom and the establishment of the theory that heredity plays a prominent part in at least certain animals.

There has been a tremendous amount of research work in the last thirty years upon cancer. Numerous phases of the subject have been attacked. A compilation of even the titles of the papers for this period would fill a fair sized volume. In going through the Index Medicus, looking for certain articles, I jotted down, for the year 1929, titles of the articles which appeared to have a bearing upon etiology and therapy of cancer. I also took a few of the more interesting titles from the years 1927 and 1928. I believe you will find them of great interest.

Titles for 1929 are: Alcoholism and Cancer; Arguments For and Against Contagion; Chronic Irritation as Cause of Cancer; Diet and Cancer; Cancer Due to Vitamin Deficiency; Electro-biologic Hypothesis; Experiments on Carcinogenic Agents in Mineral Oils; Ferment Theory; Relation of Nutrition to Cancer; Glycosuria and Cancer; Infectiousness of Cancer; Influence of Vitamin Insufficiency; Traumatic Cancer; Physiochemical Theory; Points in Etiology—Heredity, Contagion, Traumatism and Cicatrix; Specific Cancer Poison; Cancer Produced by Alcohol; Effects of Diets on Experimental Cancer; Alkalosis and Mal-Metabolism of Sugar in Cancer and Precancerous State; Cancer Followng Burn; Cancer Following Roentgen Treatment of Lepers; Chemical Nature of Cancerigenic Agent; Chemicophysical Stability of Cancer; Function of Pineal Gland and Testicles in Relation to Nature and Pathogenesis of Cancer; Histologic Resemblance Between Regeneration of Epithelium and Development of Cancer; Infectious Origin of Cancer; Interpretation of Malignant Growth Based Upon Chemistry of Cell Division; Irritation, a Cause of Cancer; Irritation Theory and Cancer as Industrial Social Disease; Lymph Stasis Precursor of Cancer; Cancer is Disease of Reversion; Parasitic Genesis of Cancer;! Post-traumatic Cancer; Relation of Reticulo-endothelial Tissue and Cancer; Relation Between Cancer Morbidity and Blood Types; Roentgen Cancer; Role of Common Bacteria and Cancer; Role of Suprarenal Cortex; Role of Surface Tension in Pathogenesis; Skin Regeneration and Cancer; Traumatic Cancer; Cancer in Two White Mice Following Infection with Gonococci and Spirochetes; Comparison of Tar Cancer and Inoculation Cancers; Effect of Cytotoxic Stimulation and Reticulo-endothelial Block on Inoculated Cancer; Effect of Filtrate of Normal Tissues on Development of Transplanted Cancer; Effect of Folliculin in Mouse Cancer; Effect of Castration in Development of Cancer in Mouse; Effects of Potassium Cyanide and also of Hydrocyanic Acid on Cancer Cultures; Hydrogen Ion Concentration in Malignant Tumors of Mice; Influence of Ingestion of Various Animal Tissues on Cancer Growth in Rats; Influence of Pancreatic Hormone Upon Rat Carcinoma; Inhibiting Effect of Injection of Cancer Emulsion on Flexner's Rat Cancer; Inhibition of Cancer Growth in Mice by Irradiated Ergosterol.

The following titles were chosen from many interesting ones for the years 1927 and 1928: Cancer and Salt; Cancer a Sequel of Syphilis or Neuro-arthritis; Cancerous Constitution; Cancer Death Rate Variations in Relation to Combustion—products of fuel, topography and population; Capillary Electricity and Bacteria Antagonism as Factors in Cancer; Structure of Protein and Causes of Cancer Antagonism Between Relapsing Fever and Experimental Cancer in Mouse; Canceration of Tissues; Regeneration and Polarity as Factors in Animal and Plant Cancers; Bleumenthal's Bacillus tumefaciens; Cancer a Disease of Either Election or Ignorance; Echinococcus as Cause of Cancer; Milk Diet and Cancer; Pathological Currents and Cancer; Venninous Etiology of Cancer; Cancer Producing Power of Carbozal; Anemia the Cause of Cancer and Consumption; Pathological Conditions of Nerves, Psyche and Endocrine Glands, and Imbalance of Serum Salts as Influence in Systemic Predisposition to Cancer; Carbon Monoxide and Cancer Problem; Modern Civilization as Factor in Predisposition to Cancer; Potassium Salts in Relatioin to Cancer; Influence of Tobacco and Other Extracts Upon Epithelial Cell; Influence of Insufficient Diet Upon Tumor Recurrence and Growth in Rats and Mice, etc., etc.

These are but a small per cent of the articles which have appeared on cancer in the past three years. No one can say that science is not delving into the problems of cancer.

There has long been the idea that cancer was in some way depending upon senescence. Ewing, after careful statistical study, concluded that the chances of dying of cancer increases throughout life, probably because of exposure to cancerigenic agents and further because habits which may tend to cause cancer increase with age. He says also that the chances of dying of cancer is increasing mainly because people are living longer. It seems possible that increase of fibrosis and arteriosclerosis may be a contributing factor in the etiology of cancer. These same factors probably hold in other diseases such as pneumonia, the greatest cause of death in old age, therefore, it may be assumed that senility merely acts in preparing the soil and in rendering it a bit more actionable.

Freund and Kaminer have a theory that cancer develops because of the lack in the tissues of a lytic agent antagonistic to the growth of the cells. They have been able to show that cancer cells undergo lysis when mixed with normal serum and that serum of cancer patients does not produce lysis of the cancer cells. The lytic agent is more prevalent in the young than in the aged. They believe, further, that this lytic material is manufactured in the intestinal canal from fatty substances, especially from palmitin. In the cancerous individual the lytic princi-

pal is produced but something neutralizes it and prevents action upon cancer tissue.

Krebs and Kubowitz, however, tested this theory and found that cancer tissue grows equally well in the serum of the persons without cancer and those with cancer. Their conclusion is that when the cancer tissue is ground it is injured and, therefore, the cell may be dissolved by serum of the normal person.

Warburg proposes the theory that cancer is a result of an excessive amount of lactic acid in the tissue and it is found that malignant tissues have a very much higher per cent of lactic acid than do normal tissues. They have a perverted form of fermentation which produces such acid, instead of carbon dioxide, from carbohydrates. He thinks that if the carbohydrate and oxygen supply could both be cut off the cancer would die. He has demonstrated, however, that it is not enough to cut off either oxygen or carbohydrates.

Burrows advances the theory that cancer results from crowding of cells and stagnation of the circulation. Therefore, any agent which sets up a crowding in the tissue and a relative reduction in the blood supply may lead to cancer. He thinks that coal tar, x-ray and other known cancer producing agents probably act in this way. Burrows has also observed that cancer tissue contains high content of vitamine B but none of vitamine A. He thinks that the application of coal tar may help to produce cancer by the destruction of vitamine A.

Robert Burich advanced the theory that the development of malignancy on the part of benign tissue is a result of quantitative changes on the part of the surrounding tissue; therefore, it may not necessarily be the introduction of a new factor or agent into the tissue. His theory is a bit vague.

Erwin F. Smith holds that cancer is the result of an infectious process and says that the incidence of cancer in lower animals from parasitic worms is steadily increasing each year. He lays great stress upon the dangers from cockroaches, bed bugs, fleas, water bugs, meal worms, dirty raw vegetables, etc., in the production and dissemination of cancer. He also believes that heredity is an important factor. He says that it takes both environment and heredity to produce a cancer. He refers to cancer districts, streets and houses.

Professor Henry Hartman reports a number of instances in which cancer developed in successive occupants of certain houses and flats. He also refers to the instances of it in several members of one family, especially husband and wife. He views cancer as an infectious disease.

Willy Meyer thinks parasites are one of the many cancer inciting factors but that they act because they produce cell death and that it is the chemical decomposition products of cells which stimulate the multiplication of other cells and result in cancer.

John A. Soper admits we do not know whether the cancer is contagious or not but he thinks it is going too far to recommend isolation and disinfection for fear that such a program would play into the hands of the quacks.

Sir John Bland-Sutton believes that cancer is parasitic in origin. He cites the instance of granuloma, tuberculoma, syphiloma and other like diseases to sustain the proposition.

Professor F. Blumenthal says that the question of contagion and parasites in cancer are not the same. He thinks that the parasites may be an exciting agent in cancer and finally produce inflammation and develop into cancer.

Ewing, in discussing the parasitic and other causes of cancer, says that it seems that there are as many types of malignant tumors as there are inflammatory processes and consequently there will be no specific parasite or other agent found as the cause of cancer.

Peyton Rous had a chicken tumor which was transmitted by the dried filtrate, and he believed that this supported the theory that cancer is caused by a parasite.

Erwin demonstrated B. tumefaciens in certain breast tumors.

Roussy believes that the infectious and cellular theories are not so far apart. He says that Nuzum has isolated a coccus from both human and mouse tumors which, when injected into animals, produces tumors.

Glover has isolated from a rat carcinoma, as well as from a human cancer, an organism which he thought to be specific for cancer. Inoculating animals with this organism produces typical growths.

Blumenthal produced a blister upon the surface of a cancer by means of sun rays and later obtained certain organisms from the blister which when inoculated into the animals produced tumors. He was of the opinion that he had discovered the cause of cancer. He produced a neoplasm by injecting spleen extract from cancerous rats.

Gye and Barnard believed that all malignant growths contained viable organisms. Their work has been proven to be faulty.

Carrel has long experimented with the growth of cancer cells in vitro and has come

to the conclusion that dying cells eliminate certain chemicals which he describes as "trephones," which have the property of increasing the multiplication of the neighboring cells.

William H. Welch thinks it is well to consider both heredity and environment in attempting to explain the causes of cancer.

J. A. Murray says that transplantation of cancer cells from animal to animal necessarily carries with it connective tissue cells but that invariably the connective tissue cell transplanted dies and the cancer cell forms upon a new stroma of connective tissue from the host. The cancer cells grow and multiply and it is impossible to tell whether it is the third or the three hundredth transplant, so consistent is the type of cell. As a rule, however, a cancer cannot be transmitted from one species to another with any degree of ease. The transplant is most successful if the animal is very young. Transplanting a tumor into a mouse in which it failed to grow renders the mouse less susceptible to subsequent transplants. There are tissue and racial specificities of cancer cells which should prevent their ready transplanting to other animals, other individuals, or even other parts of the same individual.

There has been a great deal written of late about the ability of tar to produce cancer. Percival Potts called attention to this a century and a half ago, when he observed that chimney sweeps were especially prone to cancer of the scrotum as a result of the local action of the soot.

Archibald Leitch discovered that mixing the soot with the secretions of the sebaceous glands is highly effective in producing cancer of the skin.

In 1775 Voltman and Halle described cancer of the anus and scrotum in workmen in lignite distillation plants. In Scotland many years before. it had been observed that mineral oil distillation from shale produced an undue number of skin cancers in the workman. In Czechoslovakia, Silesia, France, the United States and England it has been observed that the workers in crude mineral oil have been found to have an undue number of cancers. In England also it has been found that the cotton spinners have a large number of cancers of the scrotum and anus from the soiling of the parts with the minute particles of mineral lubricating oil thrown off by the rapidly revolving spindles.

Leitch refers to the large number of cancers in England among the workmen in the distilleries and coal tar plants and patent fuels made from pitch.

Maxwell, a medical missionary in Kashmir, calls attention to the frequency of cancer in India among the natives due to the wearing of earthenware pots with burning charcoal under their robes. It seemed that the cicatrices and ulcers later developed into epitheliomata. Medical missionaries in the Far East have reported the betel cancer from the chewing of betel leaf, tobacco, areca nut and lime.

Leitch further calls attention to the large number of x-ray workers who have fallen victims to cancer of the hands as a result of continuous exposure to the unscreened rays.

Marie, Clunet and Raulot-Lapoint produced a sarcoma in a rat by exposing it frequently to the x-ray. The tumor came long after the exposures had been discontinued.

Leitch reports having produced cancer in animals by the application of weak arsenic solution and that arsenic workers are particularly prone to have cancer. He also says that aniline workers are prone to have cancer of the urinary bladder. It is Leitch's opinion that the frequency of cancer in the aged is due to the fact that it takes so many years for the cancerigenic agent to produce the growth. He says that old animals develop cancer no quicker than the young animals from the application of tar to the skin. He says that the cells may be removed from the effects of the carcinogenic agent for a long period of time and yet there may have been such an effect made upon the cells that cancer will develop.

W. Sampson Handley believes that chronic lymph obstruction has much to do with the changing of benign to malignant tissue. He reports a woman with elephantiasis who treated it by an electric light and within a few months developed dozens of epitheliomas over the leg.

Professor J. Maisin says that the tar, in order to produce a cancer, must be applied to the skin and not injected into it, and it is best to have it applied daily for a time and after two months rest apply it daily again. Under such treatment 60 to 70 per cent of the mice will develop cancer. A peculiar fact is that if mice are first injected with tar for four months and then are burned on the nape of the neck with the tar for a period of two months 70 per cent of them develop cancer.

Kayama and Leitch have shown that in a strain of animals susceptible to cancer of the gall bladder the introduction of aseptic pebbles into the gall bladder is likely to produce cancer of the gall bladder.

F. Bang has shown that a third degree burn produces cancer cicatrix provided the person or animal is susceptible to cancer.

Barlow and Bales fonnd that radium pro-

duces skin cancer in animals susceptible to cancer. Cabazol used by Barlow and Bales produced skin cancer in one of thirty mice burned on the skin for a year.

Maud Syle, whose remarkable work on the heredity of cancer has been generally known, says that there are apparently two factors necessary to produce cancer: First, a susceptibility to the disease and, second, environment of the right kind and of the right degree. She says that a great deal of unwillingness to take heredity into consideration may be explained by the hopelessness of the cancer situation. She does say, however, that there are many points of encouragement in the heredity question. Resistance is as much a part of heredity as is susceptibility. A large number of persons are immune to cancer.

Charles Mayo thinks that both heredity and soil, both of which are susceptible to adverse influences, must be considered to establish the etiology of cancer .

In regard to the predisposing factors it seems as if we can speak a bit more authentic than we can about the direct etiology.

James Ewing blames chronic inflammamation, alcohol, tobacco, bolting of hot, poorly masticated food, and trauma for a large per cent of cancers. He considers the neoplastic reaction of tissue cells to be an inflammatory process. He says: "A rational basis for the prevention of cancer lies in the fact that the major forms of the disease are due to some form of chronic irritation. It is a sane and profitable and yet tedious occupation that has long been pursued, to investigate these chronic irritations that lead to cancer." He says that pigmented moles should be removed early in order to prevent malignancy. Infectious antra should be treated in order to prevent cancer of the antrum. The public and dental profession should be acquainted with the dangers of pyorrhea, chronic infection of the mouth and adjoining cavities, syphilis, broken decayed teeth, badly fitting plates, sharp pipe stems, etc. He says that cancer of the lip is nearly always caused by irritation of tobacco; a prominent predisposing factor is seborrheic dermatitis. He believes circumcision would reduce the cancers in both the male and female. The cleanliness of the sex organs would reduce the cancer in these organs to a great extent. He thinks that cancer of the stomach may arise as much from inheritance of dietary habits as from any intrinsic tendency to cancer. He blames habitual over eating and gastritis for most of the gastric cancers. He says that cancer of the breast is probably produced by stagnation in the ducts. He found one case with a cancer but two mm. in diameter and the cancer had developed about a duct which was distended with secretion.

Bagg produced mammary cancer in mice by taking away the young at birth, thus causing stagnation of milk in the ducts. This too was in a strain of mice in which cancer was of low incidence. It produced mammary cancer in 85 per cent of the animals. Ligation of the ducts of the breasts of one side tended to cause cancer to develop on that side more than on the other.

Adair says that in two hundred mammary cancers only eight per cent gave a history of absolutely normal lacation.

Adair and Ewing both say that an astonishing amount of inspissated or puriform material can be withdrawn from many cancerous breasts by the pump.

W. Sampson Handley thinks that pyorrhea, bad teeth and bad mouth hygiene in general are responsible for a large per cent of the cancers about that region.

Tyzzer demonstrated that massage of a cancer transplant greatly increased the number of metastases found in the lungs.

Francis Carter Wood says that the wide use of physical therapeutic methods by a group of more or less illiterate healers has frequently been responsible for a wide dissemination of cancer which might otherwise have been removed successfully.

L. C. Knox repeated the experiments of Tyzzer and found that massage greatly increased metastases.

Wood calls attention to the involuntary massage which may be given a cancer because of its location, as for example, a cancer of the tongue. He emphasises that the physician who makes an examination should always be extremely careful not to be responsible for the spreading of cancer tissues by manipulation.

Alexander Primrose calls attention to the importance of having nurses instructed as to this point.

John B. Garnett reports a case of a man who had one arm spiked by a baseball shoe. The wound received indifferent treatment for a great many months and later developed cancer. Another case was a woman of 50 years, who had a traumatic wound of the scalp. Four and one-half years, with indifferent treatment; it did not heal and at that time it had developed into a basal cell carcinoma.

He says many of his male patients with cancer of the face have said that they believed the cancer resulted from razor cuts. He also says it is common to see cancer de-

velop in the scars of past wounds and bones or on the ridge of chronic ulcers.

E. S. Clayton says cancer of the breast is preceded by a history of trauma more than by any other one disease.

Aaron Arkin says that he believes chronic irritation from smoke, dust or chemical agents may be responsible for the increasing number of bronchus cancer. To this he adds bronchiectasis, tuberculosis, syphilis, foreign bodies and influenza as predisposing factors. He also says that street, coal and stone dust, tobacco smoke and especially the exhaust from gasoline and oil engines may be important cancer causes because it is well known that coal tar products have a tendency to produce cancer. Eight of forty cases observed in the last seven years in persons who were employed in occupations necessitating extreme contact with gases, fumes, ducts, etct., developed cancer.

L. J. Hirschman and M. S. Rosenblatt report a colloid carcinoma of the rectum which followed a chronic infection of a long persisting and prolapsing internal hemorrhoid.

H. P. Charlton says it has been his privilege to see approximately 150 previously unstudied cases of carcinoma of the cervix and as one result of this clinical observation he is almost persuaded that no one of these cases would have occurred if the individual had been previously clean. He further says that he believes that the problem and solution of cervical carcinoma is locked up with the pathology and proper therapy of the inflamed cervix.

When it comes to the contemplation of the treatment of cancer we are just about as much at a loss as when deailng with the proper etiology of cancer.

Howard Lilienthal says that the temperament of the individual is of tremendous importance. It may be such as to keep him or her away from the doctor long after the tumor has been found. Then again the temperament may not permit the individual to have an operatioin when it is recommended and when it might be hopeful of doing good. It is highly necessary for both the physician and surgeon to study the temperament of the individual.

Saltzstein calls attention to the differences in opinions, the various judgments and the incompleteness of the treatment generally offered cancer patients even when they have reported with the early lesions. He calls attention to the fact that it is the older physicians who see most of the cancer patients and. hence, need the greatest amount of checking to see if the best treatments are being given. The young men, generally, and some of the older men are apt to have a spirit of unwarranted pessimism.

Shore says a general study of 1000 cases of cancer with reference to the condition at time medical advice was sought, showed that 68 per cent of the patients were in the inoperable stage when advice was sought. It also showed that a far greater number of early cases would be detected if a routine and complete examination had been made when the patients first sought medical advice. Therefore, the educational need is not entirely with the public, but also with the medical profession.

Professor Claud Regaud says that one danger with medicinal treatment of cancer is that it is too easy to be used by the charlatans. The public will grasp at straws and the charlatan will take any straw science offers and by fallacious statements and promises make it look like a life-saver.

George H. Semken also calls attention to the importance of considering the psychology of the patient and the inadequacy of the treatment so often given the cancer patient. He says it would be better if we had cancer committees to whom a patient might go and obtain an unbiased and valuable judgment as to the method of treatment for his particular case.

E. S. Kilgore says that the San Francisco Cancer Committee has had the experience of receiving requests from outside for their combined advice on individual cases. The physicians consulting them feel that when the members of the committee fight out the question among themselves and give advice that it is most likely to be correct.

Lee writes: "Rehabilitation is an important factor in the successful treatment of cancer. Following operation, nature should be stimulated to develop a resistance against the disease by every means possible. Blood transfusions are frequently vrey valuable." Foreign proteins and toxins, e.g., Coley's toxin still have their place in certain cases.

Andre Crotti says in their cancer clinic the method of handling cancer cases has been as follows: "All superficial cancers are sent to the radiologist; carcinoma of the cervix is regarded as a superficial cancer and consequently treated with radium; carcinoma of the fundus is essentially a surgical case and is consequently treated surgically, i. e. by hysterectomy; carcinoma of the breast is essentially surgical; radiology is used as an adjunct after operatoin; all cases of deep seated cancer are surgical, if still operable; carcinoma of the gum is treated by radiation; in cancer of the tongue our results have been bad, no matter what method was chosen, radiation or surgery."

Robert Vierick says there are difficulties in the way of laying down general lines of treatment of tumors; even two tumors of the same organ differ in some important respects.

Bloodgood says the cure of cancer depends upon early recognition followed by immediate, complete, operation.

George H. Semken says that roentgen and radium treatments of cancer should not be attempted except by the experienced radiologists because there is too much uncertainty as to the reaction of the tissue to these agents and that radium and roentgen ray are still in the experimentol stage. He further says that the radiologist should realize when his treatment is producing no beneficial effects and discontinue it before it has done damage which might make surgical measures impossible. He should not be slow in admitting with frankness and candor the numerous cases of complete failure, intense suffering, and severe damage that follow the radiation treatment. Cancer surgery has not reached the limits made possible by cancer study and the surgeon himself seems to be the weakest spot.

The surgeon has failed to realize from the start that in cancer work he faces a far different problem than he does in general surgery, and that he needs to view cancer surgery from a cancer angle. He must have the temperamental qualities that will fit him to do this work faithfully and well.

The outstanding points of weakness of the cancer surgeon have been "(1) his lack of contact with the progress in cancer research; (2) his imperfect evaluation of the degrees of malignancy; (3) his failure to follow through the natural regional metastases in each case; (4) his repeated failures to retrace the path of regional metastases so as to find small and silent primary tumors; and (5) his failure to interpret correctly the frequently associated inflammatory conditions."

He emphasizes particularly the danger of re-implantation of cancer tissue upon the fresh wound surface and tbat no cancer emboli should be pressed into the blood or lymph streams during the operation.

In order to be sure of successful operations he recommends that a standard operation be devised for each favorite site of cancer. He says it is inexcusable to have the thought of the cosmetic result or smoothness of wound-healing jeopardize the thoroughness of the operation. He recommends specialization in the cancer field so that each cancer patient may have a better primary operation and he thinks such a procedure would make operable many unoperable cases. I quote from Semken: "A cancer surgeon needs to recognize the magnitude of the work to be done and needs to be prepared to do it well. He will not be disturbed by the length of time it takes or by the size of the field of operation."

Henry K. Pancoast calls attention to the variableness of the rapidity of metastases dependent upon the location and emphasizes that it is important that the surgeon familiarize himself with the facts. He further says that experience with the precancerous conditions on the part of cancer specialists will affect the removal of many precancerous lesions.

Professor Leon Berard says that endodermic cancer, that is those of the stomach, intestines, uterus, ovaries, kidneys, do not respond to the action of x-ray. On the contrary exodermic cancer, epitheliomata of the skin, mouth, pharynx, larynx, vagina, cervix, etc., are treated by physical agents more successfully than with the knife. He says that when lymph nodes are definitelv malignant they should be removed by block dissection. It is well to combine irradiation with surgery in these cases. The breast should be left to the surgeon.

Morgan and Bradley say that the basis of irradiation therapy has been that the tumor tissue has neen more easily destroyed than normal tissue. This is explained by the fact that young cells are more readily affected by the rays than are the more mature cells: but it is also possible to explain the beneficial effects of radiation as a stimulation of the tissue protective forces. They have made a change in their technique and instead of giving heavy doses of x-ray or radium they give it in smaller doses more frequently, with much better results. Neoplasms lying within ten cm. of the surface receive three minutes twice daily, or five minutes are given if two visits are impracticable. More deeply lying neoplasms are given ten minutes twice daily, the first from one direction, the second from the opposite direction. They say: "Not every case has responded as well as has been hoped, but the results, on the whole, have been most encouraging and in several even quite astonishing. It has seemed that our most surprising results were obtained in the treatment of cases which had previouslv proved to be unaffected by heavy doses."

Temple Fay says pain becomes an important factor in tumors situated about the head or neck. For control of the pain he recommends rhizotomy or section of the posterior roots involved. He reports a series of cases in which the results were most satisfactory.

Pfahler recommends electro-coagulation with roentgen ray treatment for epithelioma about the skin.

William L. Clark says that an electrothermic method should be used alone only in localized tumors of the type that do not tend to metastasize. The basal cell type, even thuogh extensive, may often be successfully treated by dessiccation or coagulation.

Richard Vallack writes upon the use of diathermy in the cure of cancer growths and says that the following are considered: Certainty of eradication; minimal destruction of adjacent healthy tissue; minimal resultant scarring; minimal hemorrhage; minimal postoperative pain; minimal resultant shock; speed in operating.

Claude Regaud says: "Diathermo-coagulation by high frequency currents is tending to take important rank among procedures for the removal of cancer."

John Berton Carnette recommends, and W. Sampson Handley approves of, ethyl chloride freezing for the removal of biopsy specimens. He thinks that this tends to prevent ylmph distribution of cancer tissue from the surgical procedure.

Lillenthal called attention to the action of the Coley toxin and says: "I have long been interested in the treatment of sarcoma by this means. My per cent of good results has been considerably greater than that claimed by Coley himself. I believe that in the future we shall have a better understanding of the use of foreign bodies of this type in the treatment of malignancy."

Along in 1911 there were a number of men who attempted to use colloidal suspensions of heavy metal in the treatment of malignancy and there was some thought in the minds of some of them that favorable results were obtained in a small number of the trials.

W. Blair Bell in 1920 revived the use of heavy metals and began using a colloidal lead after his own method of preparation. Professor Bell is not claiming that lead is a cure for cancer. As yet 80 per cent of his cases are uninfluenced. The remaining 20 per cent received more or less benefit. A few of the 20 per cent have remained free of evidence of cancer for three to five years. Practically all workmen with colloidal lead solutions testify that it is highly toxic and must be used carefully and in properly selected cases.

Waters, Colston and Gay used lead in conjunction with high voltage roentgen ray. Their conclusion is that they could not be convinced of the beneficial effect of colloidal lead and were inclined to attribute the transient but definite improvement occasionally noted more to the roentgen ray treatments than to the lead.

Ullmann says: "I have seen sufficient action of lead on malignant tumors to warrant further trial." The lead augments the effect of radiation. He has seen shrinkage, liquefaction or disappearance of tumors. A quotation is as follows: "A very definite impression is that patients who have had lead treatment require, as a rule, much less morphine than untreated patients in the same condition. This was first noticed by visiting physicians and brought to my attention. As all patients receive irradiation, the reduction in pain may be due to this factor alone but the amount of radiation therapy is frequently so small that I attribute the alleviation of pain largely to the lead."

Soiland, Costolow and Meland have treated thirty-one patients and their final paragraph is: "Naturally we are disappointed in our results. That the treatment has a temporary good effect cannot be denied, but when viewed over a longer period of time, the results of the method are not encouraging. When the expense of the treatment is weighed against the possible ultimate good effects to the patient, it seems that the lead therapy, as used by us, is not the solution to the cancer problem."

Knox has treated seventy cases and thinks the colloidal lead was effective in prolonging the lives of certain patients. She says that a rare but an occasional permanent cure may be expected. In general a patient should be relatively young, not anemic, or cachectic or with extensive metastases in order to undertake the treatment. She says: "The morphology of the tumor is not a guide to the probability of its suscepitbility to lead."

Schreiner and Wende have used colloidal lead and their conclusion is: "In our hands the lack of clinical improvement together with the severe anemias and asthenias produced by this form of treatment was cause enough for discontinuing the use of colloidal lead in the treatment of far advanced cancer."

One of the most interesting reports upon the treatment of cancer which it was my pleasure to study in the preparation of this talk was a posthumous report by Dr. Henry F. Harris upon the use of uranium through electroionization. He used several preparations of uranium all of which are discussed in the paper. He introduced them into the tumor through electrodes. Quoting from the paper: "No ill effect whatever is seen in the tissues following the treatment where properly given—there being at no time swelling, pain or tenderness, and, with the exception that all of the cells infiltrated with the ura-

nium ions disintegrate and disappear within a few days, not the slightest change can be observed under the microscope. Curiously no ill effects seem to follow the destruction of the mesoblastic cells, and they all regenerate in the course of some weeks. In this connection it may be noted that the treatment may be given directly to bone, likewise without any ill consequences. One of the most important phenomena observed following the treatment by uranium ions is that in cancers with extensive destruction of the soft parts the foul odors commonly emanating from such growths almost immediately disappear, the secretions rapidly dry up, and there slowly forms a covering over the diseased area of what looks like practically normal skin; should these unpleasant symptoms recur before the healing is completed, an occasional mild treatment will keep them in abeyance until this occurs.

"Many very large, rapidly growing cancers, which have resisted both radium and x-ray in the hands of some of the most competent men in the country, have been apparently cured, and likewise a number of chronic infections, with or without ulceration, have also rapidly yielded to the treatment—the effect in all cases being extremely rapid.

"Although the treatment has been given in 365 instances, and in several of the early cases as many as from 30 to 40 times to a single individual, in no instance has the slightest constitutional effect been observed."

SUMMARY

There is a growing feeling that cancer may be a peculiar sport process of inflammation. The inflammation may be the result of infection, irritation, trauma, chemicals, lack of blood supply, stasis of blood or lymph, accumulated secretions, perverted metabolism, etc.

The gradually accumulating evidence that chronic infection and irritation of one sort or another may be responsible for malignancy is sufficient, at least, to cause us to double our efforts to eradicate pathologic conditions wherever and whenever found, irrespective of presence or absence of symptoms and distress therefrom.

The profession is not wide awake to the importance of the early treatment of precancerous lesions and of the removal of precancerous tumors. Operations on cancerous lesions are done with too much optimism that the lesion is not cancerous; therefore, the operation lacks in being sufficiently radical.

Cancer surgery should become more of a specialized surgery than it is. It is a heart wrecking type of work and those who are not particularly trained in it should be ready to relinquish the work to those who are.

Radiation is a specialty and those not in the specialty should not apply this form of therapy to cancer.

It is well recognized that certain tumors belong especially to the field of surgery and others to the field of radiology. There is a growing indication that electro-coagulation is particularly applicable to small, slow-growing, superficial lesions.

The influence of heredity should be recognized but it should not be allowed to be a depressing factor.

The use of lead as yet does not seem to be justified except in the hands of the experimentalist.

A most suggestive form of therapy is the introduction of uranium ions by means of electrodes.

There is a great future in the cancer fight for the work of a cancer committee such as that presenting the program tonight. They should educate themselves on all phases of the cancer problem and be ready to supply the information which they gather to any and all comers of the profession. The profession should feel free to use the committee as a consultant body.

A program to educate the public upon the cancer fight problem should be planned and executed as rapidly as possible.

The cancer problem is not nearly as black as was the great white plague problem twenty-five years ago. I predict that the same intelligent attack upon the problem as has been given to the tuberculosis problem in the last twenty-five years will see a decrease in the death rate from cancer comparable to the tuberculosis decrease in the last twenty-five years.

Cancer of the Stomach. Ralph H. Chaney, M. D., Augusta, Ga., Jour. of the Med. Assn. of Ga., June, 1930, p. 222.

This is a fairly detailed description of stomach cancer, covering various phases.

From the standpoint of diagnosis, any individual over forty years of age who comes with a complaint of dyspepsia, biliousness, or indigestion, should be suspected of cancer until it is proven absent. Likewise no case should be allowed to run along with a single examination following a persistent weight loss but should have frequent check up studies, by x-ray by gastric analyses, by examination of the stools for occult blood and by frequent checks of weight. The most valuable single aid in the diagnosis of gastric cancer is the findings by roentgen ray study. The characteristic cases show definite findings, ulcers having diameters of more than 2 cm. being malignant three times out of five.

CANCER IN THE ABDOMEN
(Exclusive of the Pelvis)

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In looking over the few history cards I can find no great fault in the medical and surgical treatment. We all, at least most of us, fall down in energy when it comes to writing the physical findings that are observed during our first few examinations. While most of these are faulty in stating the results of the examination, no doubt these were errors of omission rather than commission.

The diagnosis of abdominal disease cannot be considered a hit and run affair. The errors are frequent and, in many instances, constant and about on a par with those of us who think we know, and those who know. Be that as it may, the cases all require study and development. There are few instances that the parties come early in the disease, which, I assure you, does not assist you much in the cause of the complaint. The tendency is usually to think of the many probable other causes for the early symptoms and, consequently, the effect on the patient is that he has some dyspeptic affair and he continues the soda water and laxatives until certain symptoms, some months later, send him again to the physician. . I am of the opinion in all stomach, liver and rectal cases in patients after forty that it is consistent with good judgment to have the patient return every 20 to 30 days for further examination and study. This is invaluable both to patient and physician.

Aside from rectal and prostatic malignancy there can be only doubts and conjectures. However, as usual, the cases come rather late in disease with more or less tumor or nodular formation. Pain, emaciation, anemia of a more or less degree, loss in weight, vitality and strength, anorexia, vomiting, the peculiar leathery skin, the sudden progressive constipation, urinary changes, hemorrhage, ascites and age of patient, all of which tend at once to arouse the suspicion of malignancy. Especially so if the history gives you progressive, downward tendency of the general physical condition over a period of months.

So, the history is of first import. The findings are merely location. The carcinomas are, for the most part, past middle life. The history of injury plays an important role in sarcomas.

We will try to give, from our more or less limited experience, some of the ordinary findings. Inasmuch as two or three findings usually form the suspected diagnosis, I will ask your indulgence in the following:

MALIGNANCY OF ABDOMINAL AREA

Pain in carcinoma of stomach is in reality an early symptom, generally referred to shoulder and back. An old symptom of ulcer of stomach, specially pyloric end, referred to left shoulder more frequent than right or both shoulders. In our limited experience this is true in carcinoma. The pain is usually more severe after intake of food, on account of increase of pressure. Slight relief by vomiting. The pain is rather of a dragging character, rather constant, not at least so intermittent as ulcer. On the other hand, rather referred to as a constant sort of pain. There usually is presented a superficial area of tenderness between the nipple line and center of abdomen with a corresponding area posteriorly between the fifth and twelfth dorsal vertebrae.

This character of pain, associated with age past middle life, dyspepsia, anorexia, nausea, coffee ground vomitus, (in one instance of my own excessive blood in vomitus was confusing), loss of weight, pale leathery color, occasionally a palpable tumor, occasionally enlarged glands in neck and axilla. Absence of free HCl in stomach, low total acidity, with x-ray finding irregularity and filling defect, clinically is suggestive of malignancy.

GASTRIC CARCINOMA

Is in a greater part based on age, family history, history of stomach over considerable period. Associating this with general weakness, emaciation, continuous pain, especially some hours after eating. The 11 p. m. and 1 a. m. night pain peculiar to cancer of stomach, coffee ground vomit, absence of free HCl and the presence of lactic and fatty acids and x-ray findings. The x-ray wlil give positive evidence of carcinoma of the stomach. This has been variously placed at 90 to 98 per cent. There is hardly excuse for not using x-ray in gastric cancer.

There is usually the late sign of carcinoma of stomach in way of palpable tumor in the epigastrum, umbilical or hypochondriac region. The mass is usually hard or at least of a firm consistency, sometimes nodular. If epigastric or umbilical tumor is present the mass shows some movement in inspiration. The tumor in umbilical or hypochondriac region frequently disappears, due to peristalsis. The abdominal aorta transmits pulsation widely marked. Tumors at pylorus are most movable. Pain on palpation is common. At times there is visible peristalsis. Small nodules just beneath skin at or near navel area.

CARCINOMA OF LIVER

There is progressive enlargement. However, in a recent case there was evidently a primary nodular cancer, associated with a more or less degree of cirrhosis. In these cases the liver is not enlarged to any considerable extent. The abdomen is distended in the upper half. The edge of the liver may be palpable on respiration. Usually irregular with large or small nodular findings. Age, beyond forty. May be primary or secondary. Jaundice, ascites, dilated superficial abdominal veins, nodules at navel and along the abdominal white line do occur. Slight temperature. Dyspepsia, anorexia and great loss in weight.

Diagnosis: Age of patient, after 40 years. History of disease in other areas. Characteristic pain, the constant, dull, boring pain, sometimes sharp in the upper right abdomen. The right shoulder pain is frequently present if disease attacks the bile ducts. All pain increases with advancement of disease. Pallor and anemia with red blood cells around 3,000,000 or lower. Loss of weight varying from 40, 60 or 100 pounds. Detection of tumors makes hepatic cancer fairly certain.

Pylorus cancer may be mistaken for hepatic cancer. A point to bear in mind that hepatic cancer is a frequent secondary involvement to pyloric cancer. The pylorus does not present the nodular findings found in hepatic disease; pyloric cancer presents one nodule; this nodule is depressed by deep inspiration, but is not raised by forced expiration. The hepatic sarcoma is more common in young. Pain is less frequent. The yellow, swarthy, anemic color is rather uncommon than common findings as is in carcinoma. The liver surface is not nodular, but a tendency to enlargement and smooth with a general firmness. About 65 to 70 per cent of all cases of carcinoma of the liver have ascites. Usually does not require tapping. Probably due to some disturbance of the portal lymphatics.

GALL BLADDER

Malignant disease of the gall bladder is almost impossible of diagnosis. The presence of a hard, irregular, nodular tumor in region of gall bladder with loss of weight, associated with pain, should be very suggestive, especially in women. Icterus is not an early or valuable symptom. A tumor usually felt extending diagonally downward and inward in direction of umbilicus. Rather variable in size, rather firm and hard, due to distention of gall bladder or involvement of the surrounding structures. Clinical manifestations are local and general. Location has much to do in the production of symptoms. Beginning slowly it is usually well developed before discovery.

CARCINOMA OF SIGMOID OR CECUM

Usually no early symptoms, except in some cases pain, low grumbling character, until obstruction occurs. Age, increasing constipation, specially noted in sigmoid disease. Constant repeated desire to evacuate bowels, tenesmus, passage of blood from rectum, loss in weight; x-ray is a valuable adjunct to diagnosis.

KIDNEY

Renal carcinoma may be primary or secondary. As a rule late in life. Reported in children. Skin pigmented, abnormal growth of hair on pubis and axillary space, due, no doubt, to influence on the suprarenal body. Renal hemorrhage, if continued and profuse, is diagnostic more than probable of cancer, pain not a constant symptom. Usually most severe during terminal stage. Then found in lumbar region.

In sarcoma, rapidly developing abdominal distention, unilateral in a child, is almost always suggestive of sarcoma of kidney. The smoothness of tumor, limited motion on deep respiration. Anemia, secondary type, is late in sarcoma and early in carcinoma. The size of the tumor in carcinoma is very small when anemia develops. It appears in sarcoma when the tumor has reached rather large proportions.

CARCINOMA OF PANCREAS

Carcinoma of pancreas rarely, if ever, presents a tumor. The stomach and colon lie in front. There could be little opportunity to demonstrate a tumor of the pancreas in this condition. Occuring late in life, at least past middle life, jaundice, marked and progressive, sometimes nausea and vomiting, emaciation. The symptoms enumerated with the presence of glycosuria would, at least, be suggestive clinically of carcinoma of the pancreas. I call your attention to glycosuria which is a finding of much import and will assist in directing you nearer an almost impossible clinical diagnosis, which at best, is only a suspect.

CARCINOMATOUS PERITONITIS

Secondary to abdominal malignancy. Masses of growth may be detected. Usually edema develops which renders palpation obscure. There may be a rope like feel across the abdomen, due to rolling of omentum. Adhesions and cystic conditions may give rise to palpable masses. Usually nodules are detected through the abdominal wall.

CARCINOMA OF MESENTERIC OR RETROPERITONEAL GLANDS

These are usually secondary to an abdominal malignancy. May present a mass in the

middle of the abdomen. So obscure, like most of malignant diseases of the abdomen that clinically a diagnosis at best would be a good guess.

INTESTINAL

Malignant disease usually occuring after forty years. In the intestine the disease is much earlier. Maydl reports one-seventh of all cases occur before the thirtieth year. Malignant disease of the intestine is usually primary unless by extension from adjacent structures. The most frequent location is rectum, sigmoid next, then other portions including cecum and appendix. Relatively rare in small intestine and more frequent in ileum than above. The duodenum, until recent years, was thought to be free from this condition.

CARCINOMA OF COLON

Usually occurring at the splenic and sigmoid flexures. Pain in the left hypochondrium. This pain is usually dull and more or less permanent and continues over considerable time. Or sharp, spasmodic pains may be present. The attacks usually follow constipation and relief from the constipation usually reduces the pain. Pain here is attractive as it may be the only early symptom presented. Late in life. Borborygmus, visible peristalsis, presence of tumor, alternating constipation and diarrhea, occult blood in stools.

It matters not the variety of malignnacy in the abdomen, the pathologist usually clears that part. The main feature is diagnosis of a cancerous disease and advise your patient accordingly.

UTERINE CANCER

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The incidence of uterine cancer ranges through the entire adult life. The average age is somewhere between 45 and 50. Three to seven per cent of cervical cancers occur under the age of thirty. The nullipara shows three to five per cent incidence in the published series. These are important items to remember. Is cancer on the increase? Statistics show conclusively that it has increased in certain races, such as the negro. The prolongation of the average life span has doubtless caused a part of the increase, as cancer is a normal expectancy of the old.

Cancer of the cervical stump may occur after total hysterectomy. It very rarely occurs after a proper repair of the cervical lacerations. Graves reported, in 1927, 4,815 cases of cervical repair including trachelorraphy, amputation and cauterization with only seven cases that later developed cancer. In these seven cases he felt that cancer was overlooked in three while in the others the operations were not properly done.

HEREDITY

Heredity plays a part in the etiology of cancer, although its exact place of importance has not been determined. Good family histories and autopsy reports will have to be kept through several generations in order to determine the exact part it plays. There seem to be, however, three types of families:

First: Those in which cancer is never seen.

Second: Those with occasional or normal incidence.

Third: Those in whom cancer occurs so frequently that they are known as cancer families.

CHRONIC IRRITATION

Inasmuch as all human beings are, or may be, subjected to about the same irritations during life, it does not seem that chronic irritation, by itself, can be given too serious consideration. There must also be some other factor, which we may call "predisposition," present in the individual developing cancer.

Maud Slye has made some very interesting observations of trauma in mice. The mice without hereditary predisposition did not develop cancer after trauma or irritation, while those predisposed did. She carried her observations still farther. She found that there was an hereditary predisposition to cancer of certain organs in mice families. In one mouse family trauma of the breast would produce a malignant tumor of the breast, but it could not be produced in any other portion of the body. In another family she could produce mouth cancer by trauma but nowhere else.

INFECTIOUS THEORY

Nuzum's report in 1924, of his work and findings on the infectious nature of cancer, has received very little support.

Ewing, in discussing it at the International Cancer Conference at Lake Mohonk in 1926, stated that "he voiced the sentiment of all cancer students when he said, that it is incompatible with the known facts about cancer. Cancer is not a single disease like tuberculosis. Cancer is a great group of diseases of varied origin and cause."

Blair Bell's theory of cell dedifferentiation is an interesting hypothesis, based on the supposition that the normal cell grows under certain restraints such as:

First: tension of surrounding tissue

Second: nutritional changes

Third: necessity of function

Fourth: purposeful control of the organism.

If these normal restraints are removed or destroyed by injury to the tissue, some of the cells die while others live but do not return to normal or healthy differentiation but become dedifferentiated or cancer cells. He goes on to show that these cells closely resemble those of the syncytium. He thinks that the tendency of the chorionic villi to invade surrounding tissue is checked by some hormone developed by the body because the chorion is a purposeful organ.

CLASSIFICATION

Broder's classification of cancer of lip based on the histology is probably the best and simplest. It has been followed by Martzloff, who reported histological and clinical study of 387 cases from John Hopkins Hospital; also by Pomeroy and Strauss, who reported cases studied along the same line.

Cancers studied in this way fall into three histological groups. Martzloff's series showed that there existed a direct relationship between the predominant type of cancer cell present and the malignancy of the tumor.

First: tumors composed principally of spinal cells were the least malignant;

Second: the transitional celled type are more malignant;

Third: and the fat spindle celled type were the most malignant.

The adenocarcinomas fell between the spinal and transitional celled groups in malignancy.

Martzloff's observations warrant the belief that epithelial pearls in the carcinomas are significant only when they occur in the spinal celled group of tumors where they indicate a lessened degree of malignancy. He found that there were carcinomatous extensions from the primary tumors into the broad ligament in the first six months of the symptomatic disease in all groups except the spinal celled type. Less than ten per cent of the patients with broad ligament involvement lived more than one year following operation.

TREATMENT

There have been 38 cases of uterine carcinoma treated in the two hospitals during the years 1929 and 1930. Of these 38 cases, 33 were of the cervix; four involving the uterine body, and one involving the left adnexa.

The striking feature about these case reports is that there were almost as many methods of treatment as there were cases. This seems unfortunate, when from the literature of recent years it seems that the best treatment of cervical carcinoma is pretty well standardized, based on statistical results, as is also cancer of the body of the uterus.

Unfortunately, we have no follow up records of this series except in a few cases so we have nothing to base judgment upon as to whether or not the case was treated by the best method for an end result.

All complete statistical reports are based on a completed five year period.

In his introductory statement to an article by H. S. Crossen in the Southern Medical Journal of April, 1928, "Giving the Uterine Cancer Patient the Best Chance to Survice," he very beautifully sums up the position we all should take in deciding our treatment. Crossen says, "The point at issue is not simply that of securing a good or bad result; of relieving pain or not relieving it. The question is far more serious than that, for it deals directly with the life or death of the patient. Will the patient be alive or dead at the end of a certain period? Will she survive or will she not survive? It is only when we keep this in mind that we realize the full measure of our responsiblity. The knowledge and skill of the physician treating the cancer patient is all that stand between the patient and certain death." To quote him further, Crossen says, "Our general plan of treatment of cancer of the cervix uteri is to give a heavy dose of radium, as large as can be given without danger of sloughing into the bladder or rectum, and then follow this at a selected time by deep x-ray therapy of the highly penetrating type. This has been found to be the most effective plan of treatment in nearly all cases in the stage at which the patients come under observation. It stops the bleeding and checks the growth better than any other form of treatment and gives a better chance for permanent cure. It is only occasionally that a case of cancer of the cervix is seen early enough to warrant operative removal. In those exceptional cases in which we feel operation is justifiable, the plan followed is first to give a heavy dose of radium as though we were going to depend on radium for the cure. Then within a short time (a week or ten days) the hysterectomy is carried out, and later this is followed by deep x-ray therapy. This program gives these very early cases the benefit of both operation and radiation."

This is about the routine treatment followed by most physicians having a large uterine cancer experience. In view of Martzloff's studies, showing the early invasions of the perimetrial tissue, it is probably the safest and surest.

ON CANCER OF THE BREAST

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This report embraces a review of twenty-four cases treated in St. Joseph's Hospital and the Good Samaritan Hospital during the past two years. Four cases can be eliminated, two from each hospital because of an error in diagnosis—the pahttological reports did not show malignancy.

This report is necessarily incomplete since there is no attempt at a followup and it is too early to report on "cures."

Primary tumors; i.e., (a) single, limited, freely moveable tumors with no axillary gland involvement,—5 cases; (b) a little more advanced with axillary gland involvement,—6 cases; (c) still more advanced tumors of the breast. adherent to the skin and axillary gland involvement,—5 cases; (d) advanced tumor with fixation to the pectoralis muscle and skin with marked axillary gland involvement,—one case; (e) rigid fixation of tumor to the skin, muscles, and chest wall, "frozen in" and rigid fixation of axillary glands,—2 cases. Recurrent tumors in the scar and in axilla,—one case! distant recurrences—2 cases. The opposite breast was involved in one case. History of injury in 3 cases. Multiple tumors were present in one case.

Radical operation without x-ray,—8 cases; radical operation with x-ray,—9 cases; palliative x-ray,—2 cases; no treatment, one case. Recurrences after radical operation,—one case; recurrences after radical operation and x-ray,—2 cases. Died in hospital after radical operation one year previous to palliative x-ray for pelvic bone metastasis.—one case; died in hospital after palliative x-ray. —one case.

My aim is to present the best known means of diagnosing and treating cancer of the breast and suggest their uniform application in our two hospitals. If these means were applied at the very earliest period the actual cures could be increased very materially.

In the vast majority of cases the patient waits for pain or growth in the tumor before seeking an examination and advice. The public must be taught to seek an examination as soon as a lump is felt in the breast, or a fissure, a keratosis, or a red granular area appears on the nipple. There has been a very noticeable improvement in the diagnostic ability of the medical man when dealing with cancer of the breast during the past thirty years. Bloodgood states that prior to 1900 in Johns Hopkins Clinic more than 50 per cent of the cases were inoperable, while at the present time it is about 5 per cent. The physicians must learn to recognize the tumors that may become or are cancer. The very early recognition of the precancerous tumors, i. e., before the cells change into cancer, should be our aim. If cancer of the breast can be diagnosed early a cure can be effected. If the diagnosis can be made early before there is axillary gland involvement, you can cure 75 per cent of the cases. With axillary gland involvement the cure is reduced to 10 per cest.

Cancer of the breast usually occurs in women over 35 years of age. I had one case of cancer of the breast in a young woman 19 years old. Mistakes in the clinical diagntsis are most frequently in young subjects. Every tumor in the breast should be considered malignant until it is proven benign.

Examine the patient in the erect posture and again in the recumbent posture, compressing the breast with the palm of the hand and then with the fingers. Always examine both breasts and both axillae.

The presence of a tumor in the breast is usually the first symptom. The tumor, when first noticed, is usually a small induration which gradually enlarges, involving more and more of the breast tissue. In a small percentage the entire breast enlarges and becomes indurated. In the atrophic scirrhous cancer there is a gradual shrinkage of the entire breast. The most common site of the tumor is in the upper and outer quadrant of the breast. In the incipient stage of cancer it is usually a rounded discrete nodule situated in the glandular tissue of the organ and is freely movable with the breast tissue. One of the earliest signs is a shortening of the fibrous trabeculae producing a pitting or retraction of the skin over the site of the tumor, which can be exaggerated by pinching the breast between the fingers and the thumb. If the tumor is malignant there will be an increase in the convexity of the breast. A sulcus or dimpling of the skin over the tumor is particularly noticed when the arm is raised. These symptoms are never associated with a benign tumor unless they have become infected. Pain, fixation to the skin and pectoralis, and ulceration, are all late symptoms. Retraction of the nipple is by no means characteristic of cancer of the breast. Discharge from the nipple occurs in from 3 to 5 per cent of the cases of cancer of the breast. The glands on the posterior wall of the axilla close to the subscapular artery are often the earliest and only ones involved. Enlargement of the axillary lymph nodes often occurs in diseases of the breast other than cancer. Enlargement of the supraclavicular group of lymph nodes occurs late

in the disease, as a rule. The axillary glands should be regarded as potentially malignant in every case of breast cancer.

The concurrence of cancer and benign tumors arising independently in the same breast are not uncommon. Patients may have a cancer in one breast and a benign tumor in the other. An apparently non-malignant breast tumor may become cancer. Cheatle of London has shown that the simple cyst of the breast may become malignant. Do not send patients away with apparently benign breast tumors without advising them to have periodic examinations.

When there is an uncertainty in the diagnosis, make an exploratory operation, remove the tumor and have a frozen section diagnosis; frequently unnecessary mutilating operaitons will be avoided, and many cases of cancer will be permanently cured.

Preventive measures should be instituted in all abnormal breast conditions. Avoid all forms of chronic irritation. If ulcers, fissures, or granulations of the nipple exist, they should be cleansed and healed. All tumors which may be precancerous should be removed.

Cancer of the breast is one of the most hopeful and curable forms of cancer when diagnosed early, and skillfully treated. The limitations of surgery and irradiation in the advanced stages of the disease are but little understood by the mass of the medical profession and the laity.

A review of the recent literature on the treatment of cancer of the breast shows a great difference of opinions among men of vast experience and world-wide reputation. Many believe that surgery alone gives the best results. Practically half of the operated cases covered in this report had surgical treatment only. The others had radical operation and x-ray combined.

The report of the committee of the American College of Surgeons[1] on the treatment of cancer of the breast with radium and x-ray, (Greenough, chairman) concludes that prophylactic x-ray did not increase the percentage of cured cases five years after operation and x-ray alone failed to cure any of the cases. X-ray does not add to the life duration in cases of radical operation which failed to cure. There appears to be no material advantage to the patient in the employment of prophylactic x-ray as a supplement to radical operation. X-ray treatment prolongs life in case of recurrences both locally and in the axilla, spine, mediastinum, pleura and lung. Both the low and high voltage apparatus was used in the cases covered by this report. Early favorable cases without axillary involvement having radical operation and x-ray give 57 per cent of successful results. The more advanced cases with axillary involvement gave only 16 per cent results. No successful results were obtained without operation. Recurrent cases gave only three per cent of satisfactory results at the end of five years.

Harrington[2] gives a review of 2083 cases of breast cancer operated in the Mayo Clinic between 1910 and 1923. Of this number final results were obtainable in 1859. This is a very good statistical study and is not favorable to the use of x-ray. The three and five year successful results were about 5 per cent higher when x-ray was used, but the ten-year results were less with x-ray than without it. His conclusions are like those of Greenough, for the A. C. S., that the radiation does not add to the chances of cure. It must be remembered that most of these cases were operated in the days before modern x-ray technic had been developed.

Wainwright[3] illustrated his paper by large sections of the entire breast showing (1) involvement of pectoral muscles unappreciated clinically, (2) multiple malignant tumors, (3) stasis and dilated ducts leading to carcinoma, (4) spread of carcinoma by connective tissue septa, (5) benign tumors becoming malignant.

Rodman[4] discusses the development of the modern operation for cancer of the breast.

Behrend[5] discusses amputation without removal of muscle. He uses preoperative and postoperative radiation. He says that there is some difference of opinion regarding the vaule of radiation, but that until the matter is settled, he does not think the full duty to the patient is discharged, unless radiation is given during two years following surgery.

Buchanan[6] shows end results, as showing 34 per cent of patients remaining well more than three years and 29 per cent more than five years. The end results, in this author's opinion, are not materially increased by the x-ray.

Kahn[7], in a series of 148 cases of carcinoma of the breast with extensive involvement of the glands at the time of operation, found that surgery failed to cure more than ten per cent for five years and that, so far as cure was concerned, the addition of postoperative x-ray irradiation was of no marked benefit. However, it has been possible by x-ray treatment alone or in combination with colloidal lead to relieve pain and produce recalcification in metastatic bone lesions.

Pain is an indication for x-ray treatment whether metastasis can be demonstrated or

not. Deep irradiatioin is of value chiefly after metastasis has taken place. It is then indicated, first, for the relief of pain, and second for the prolongation of life. All cases with either single or multiple metastatic bone lesions should be treated by deep irradiation as soon as possible. The arrest of destruction and recalcification may not be demonstrable for periods ranging from several months to a year or two. It is generally advisable to have the patient return at intervals of three months for observation and further treatment.

Bloodgood, in discussing the report, stated that there is no evidence that irradiation has added to the percentage of cures in cancer of the breast, but it is important for the public and the profession to know that irradiation with the x-rays or radium or both is the only treatment that offers any relief when metastasis produces pain and discomfort. In 100 cases of intravenous lead treatment there was no evidence that lead was at all helpful with or without irradiation. In the early stages, surgery offers most.

Portman[7] says the value of radiation as an adjunct to operation for breast cancer is doubted by some surgeons. The fact, however, that there is frequently marked improvement in patients with inoperable cancer when treated by radiatioin makes it logical to assume that it must be of value in the operable cases also. If radiation can assist in eliminating or deterring the development of tumor cells which will almost certainly be left behind after any operation, then postoperative radiation is logical. The three-year cures by surgery are about 35 per cent. By postoperative radiation and cooperation between surgeon and radiologist, the number of three year survivals will be increased from 35 to 45 per cent. This is gathered from a review of a number of American and European reports.

In a clinical and pathological study of 234 cases from the clinic of the Free Hospital for Women, in Boston, Smith and Bartlett[8] report the cases operated upon, 53 per cent were alive and well at the end of three years, and 36.9 per cent at the end of five years. The results at the end of three and five years were practically the same whether treated by simple amputation or by radical amputation. They hold this to be coincidence and not to be used as an argument in favor of simple amputation.

Microscopic examination can determine the degree of malignancy and indicate the prognosis; in the series surviving the 7 year interval, class 1 showed 83.3 per cent surviving, class 2 showed 28.6 per cent and class 3 only 8.6 per cent. In classes 2 and 3, the findings of axillary gland metastases will markedly affect the prognosis.

After postoperative x-ray the results were uniformly better both as to gross figures, to type of operation, and to degree of malignancy.

Williams and Curren[10] believe that all operable cases should have radiation before surgery, and postoperative prophylactic radiation. What constitutes an operable case, the surgeon should decide. For inoperable cases radiatioin is the only available treatment at present. They use rays from 120 to 200 kilovolts, and cover the chest from the supraclavicular gland area to the free border of ribs anteriorly and posteriorly.

Keyes[11], during the last five years, has come to regard treatment of primary carcinoma of the breast with radium needles as preferable to operation. In the period from August 1924, to April, 1929, ninety patients were treated with radium. The dosage employed is relatively small (up to 100 mgm.) and the time of exposure is long (seven days or more). The radium is distributed in two main areas: (1) the primary growth, and (2) the lymphatic drainage, including the pectoral area, the axilla, and the infraclavicular, supraclavicular, and intercostal spaces. The needles are inserted through small stab wounds under nitrous-oxide oxygen anesthesia. The effect on the primary growth is usually complete after four months. If the tumor has not entirely disappeared at the end of that time it may be necessary to consider further treatment, operative or radiological. An extensive operation is never required. As a rule no operation is performed. Enlarged lymph glands usually disappear under radium treatment.

In the first fifty of the cases reviewed, histological proof of the nature of the growth was obtained, but in the others no specimen was taken as it has been found that cutting into the tumor sometimes results in the appearance of an implantation growth. Histological evidence of the effect of radium on the tumors has been obtained.

Twenty-three of the ninety patients whose cases are reviewed were treated recently. Of the remaining sixty-seven, forty-one had operable tumors. A good result was obtained in forty-five cases, twelve of which were inoperable. Patients have remained apparently cured up to four and a half years after the treatment.

Lee, Burton J.,[12] who formed our local cancer committee, writes: "The treatment of carcinoma of the breast by irradiation methods, alone or combined with radical surgery,

gives a higher percentage of good five-year results, than when radical surgery alone is employed. Preoperative irradiation aids to the percentage figures of satisfactory five-year results. High-voltage treatment should be employed, permitting an interval of three or four weeks between treatment and operation. Carried out in this way, bleeding at operation is not more active and wound healing is not delayed. Postoperative radiation has increased the length of life after operation and has yielded a higher percentage of satisfactory five-year results than when radical surgery alone was employed. Radium is more effective agent than roentgen rays in dealing with this disease.

The experience of Schoute and Orbaan[14], based on 106 collected cases in one hospital, in nearly all of which the same surgeon operated in the same way, the diagnosis was controlled by microscope and the roentgen treatment (medium voltage) was always given in the same manner, showed 44.4 per cent alive after five years as against 35.9 per cent following operation only, so they conclude, "We are justified in going on with roentgen treatment after operation for carcinoma. We can go farther and say we should not be justified in stopping."

O'Brien[15] makes a plea for a tumor clinic which will function similarly to our cancer committee, "if we are to get anywhere in this tremendously important question of the treatment of cancer, it is imperative that all hospitals comparable in size to this (Boston City Hospital) should establish a tumor clinic for the diagnosis and therapeutic disposal of its cancer cases. A tumor clinic should function as a diagnostic center, a clearing house, if you will. Its personnel should include one or more members of the medical, surgical, pathological and radiological services. Its members should be young in enthusiasm but old in experience, with a well formulated policy, flexible enough, however, to meet the exigencies of new thought. It will presume an adequate record system and classification based on that of the College of Surgeons, or its equal, as well as a follow-up system for future and maybe invaluable data. Here cases may be graded on purely clinical facts and compared with later pathological grading and surgical findings. Lee has attempted this for cancer of the breast, using age, lactation, rate of growth and extent of disease, to which he has given weight and grading factors to establish a clinical index of malignancy. If this is corroborated and extended to other areas, such an index may well be of inestimable value to the practicing physician who sees these cases early. A tumor clinic, furthermore, will provide facilities for diagnostic roentgen studies and so preclude needless surgery in those patients showing secondary lung, bone or visceral metastases.

When surgery is designated by the tumor clinic group as the particular therapeutic measure to be employed in a case, it should presuppose a common surgical method of attack. One hesitates to talk about standardization in surgery. It smacks too much of commercial efficiency. Yet it is evident that end results can never be compared with anything like definiteness until surgeons adopt a uniform procedure in similar circumstances.

Facilities for a frozen section diagnosis not only should be at the disposal of the operating surgeon but should be used by him. The grading of tissue by the pathologist is essential collaborating. To report that a patient has a carcinoma is woefully incomplete information and no longer acceptable. Knowledge of the radiosensitivity of a tumor will have its influence in both surgical technic and irradiation method."

He has survey 71 cases of breast cancer treated postoperatively in the Boston City Hospital between 1923-24-25, in 50 per cent of which irradiaiton was not begun until ten months after surgery. "This probably reflects the attitude of the futility of irradiation held by many surgeons, but I am of the opinion it most probably reflects the failure to utilize the facilities of the hospital, due to the anxiety to get patients in and out of bed, so that irradiation is not thought of until secondary carcinoma appears.

Irradiation now has something definite to offer. With the reports at hand on the efficacy of preoperative and postoperative irradiation in breast cancer, there is every reason why it should be resumed. Until our present methods of irradiation have been analyzed in conjunction with a standardized surgical procedure and pathological control, prophylactic irradiation must be considered of the greatest value in the treatment of primary mammary cancer.

Perhaps we may perfect our surgical, pathological and irradiation methods only ultimately to halt because we cannot plumb the depths of a biological process in the terms of physics. But until we have perfected what we can well perfect, we should not accept the nihilism that is about us."

From Forsell's clinic at Stockholm[16] comes the following: "We have been practising the preoperative treatment of operable carcinoma of the breast at Radiumhemmet for the last five years. It is far too early, there-

fore, to pass any decisive judgment on the strength of statistical results, as to the value of this treatment. A preliminary computation of the results—to be published in Acta Radiologica in the course of 1929—goes to show, however, that recurrences are obviously less frequent and that they occur later in those cases where preoperative roentgen treatment has been given. In most cases the classic mammary amputation is carried out three or four weeks after conclusion of the treatment. It is very important that the operation should be carried out when the tumor is still under full influence of the irradiation. After the operation postoperative treatment is given, the usual technic being followed."

Pfahler[16], the dean of radiation therapists in America, in summary of a review of 939 private patients referred for treatment of cancer of the breast says:

"Preoperative treatment and postoperative treatment are advised, because of theoretical, experimental and clinical proof of their value. In the advanced cases of carcinoma with involvement of glands, preoperative and postoperative treatment gave 46 per cent of five-year cures, while 38 per cent of the totally inoperable cases are made operable and in 10 per cent of these, patients were alive after five years.

Postoperative treatment was used in 242 cases (only 25 per cent of 939 cases). Of the patients without involvement of glands 89 per cent, and of those with nvolvement of glands 47 per cent, were symptom-free after five years. We, therefore, advise postoperative treatment in all cases within two weeks after operation. The statistics recorded in the literature show 20 per cent of five-year cures by operation alone, when glands are involved, and 35 per cent when irradiation is added. Taking the good and bad reports, it is evident that postoperative roentgen treatment gives 75 per cent improvement over surgery alone, and our own records show approximately 100 per cent improvement. Primary operable carcinoma should be treated by irradiation when operation is contraindicated, but in general it would seem that a combination of surgery and irradiation adapted to the individual case may be expected to give the best results."

SUGGESTED TREATMENT

The treatment I suggest is as follows:

Primary tumors, (a) both single and multiple, freely moveable growths, with or without axillary gland involvement, radical surgery followed by x-ray.

(b) Single or multiple growths adherent to the skin and or, to the pectoralis and with superior axillary gland involvement, x-ray followed in three or four weeks by radical surgery and postoperative x-ray.

(c) Growths that are "frozen in," i. e., rigidly fixed to the adjacent structure with extensive involvement of the axillary and supra-clavicular glands,—radium and x-ray.

Recurrent tumors: (a) growths that are local and freely moveable, preoperative x-ray, radical operation, and postoperative x-ray.

(b) Growths that are fixed, i. e., "frozen in," or ulcerated and axillary and supra-clavicular gland involvement, radium and x-ray.

(c) Distant metastatic involvement, palliative x-ray.

The radical operation for cancer of the breast permits of a number of different incisions; we usually use the one described by the late W. L. Rodman, and is understood to mean the removal in one piece of the following structures: The breast with all of the skin over the breast, the pectoralis major and minor muscles, the glands and gland bearing tissue in the axilla and the deep fascia from the clavicle to the epigastrium and from the sternum to the latissimus dorsi muscle, and the removal of the supra-clavicular glands in case of involvement of this group. No cold knives or scissors should be used for cutting the tissues in the radical operation. Both of our hospitals are equipped with the radio-frequency electric cutting and electric coagulation instrument. The cutting and coagulating currents operate synchronously and without interference so that as the surgeon cuts, the assistant may use the coagulator to dry up the bleeding points not sealed by the cutter. In our last radical breast operation we ligated but six bleeding vessels. The time consumed in the operation is shortened by the use of this instrument and healing is rapid and primary.

When the diagnosis of cancer of the breast is made early and the treatment as suggested is carried out, the percentage of cures in our two hospitals will be as good as is possible to obtain with our present knowledge of the disease.

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MALIGNANCIES IN ACCESSIBLE LOCATIONS

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The problem of accessible malignancies is somewhat different than the problems presented by malignancies in other localities as taken up by the other members of the committee. The diagnosis is usually easy and simple and it would be rather presumptive for me to take your time in discussing this phase of the subject. We all know, however, that syphilis and lupus must be kept in mind.

The handling of patients with these lesions is many times not so easy, and we see them, sometimes with very extensive lesions, going from one place to another and not consenting to adequate treatment. Some cases and perhaps a large number go to various institutes and have caustic pastes applied, with the result that the malignancy many times is cured but much more normal tissue is destroyed than necessary.

Skin cancer has long been a scourge and curse to the human race in the later years of life, and the adequate treatment should be an obligation of the family physician. It is not always easy for the family physician to handle the patient, however, and he should not be criticised if his patients do occasionally wander about with inadequate treatment. Theoretically, at least with proper education of the public in these cases, there should be practically no morbidity or sacrifice of organs such as eyes, ears, noses, etc. Most of these lesions on the face come from warts, moles and scaly spots. Also the chronic mechanical irritations must be kept in mind as in the smokers and those who wear glasses. In these cases the infrequency of metastases increases the chances of permanent cure. The basis of all treatment is thorough and complete destruction of the lesion. The methods used are x-ray, radium and electro-coagulation. The cold steel knife is practically never used and the actual cautery is not used as much as formerly.

I thought it might be interesting to present the data we have on these cases that have been treated in the hospitals. These records show the incompleteness of information and the lack of follow up reports. It is the hope of the committee to establish a follow up system for all types of cancer cases, and when that is done their review will be much more interesting and instructive.

BRIEF REPORT OF CASE HISTORIES

SJ—14445, 9-9-28. Swelling on the forehead where struck with an axe two months ago. X-ray before entrance did not show bone destruction, x-ray treatment was given. At operation the tumor was found to involve the bone extending into frontal sinus. He was discharged in four days. At the second admission about one month later (10-2-28) the tumor had extended through the bone with pulsating brain tissue showing. He had no further treatment and died about one month later. (11-1-28). Pathological diagnosis; Endothelioma.

SJ—13986. Sarcomatosis (?), 4-27-28. Marked induration of the skin of the lower extremities. The record was not very complete in this case and there was no positive diagnosis established.

SJ—14244. Carcinoma of the Glans Penis. Amputation was done (8-3-29) and the pathological diagnosis was squamous cell carcinoma; there was postoperative x-ray. It would be interesting to know what happened to the patient and how long it took to happen. However, he is probably well and happy.

GS—6607. Sarcoma of Left Axilla Involving Ribs, 9-12-29. Nodes under the skin of the left arm from shoulder to neck and also in the left axilla. There was operative removal of the axillary glands on the day of admission to the hospital. Pathological report, round cell sarcoma. The patient died about one month later (10-15-29); the postmortem showed ribs involved. The record does not show much investigation.

GS—6882, 10-9-29. Tumor Under the Left Ear. Clinical diagnosis was carcinoma, the tumor was removed and the pathological report was inflammatory.

GS—42-5-29. Cancer of the lip from smoking and cancer of the stomach. The patient died in coma and there was no further investigation. There was no record evidence to substantiate either a diagnosis of stomach or lip cancer. From the brief his-

tory we take it that he was a smoker. He might have died from this.

GS—6756. 8- -29. Carcinoma about the orbit. This patient was referred from New Mexico for treatment of an extensive carcinoma involving the entire circumference of the right orbit which dated back about 20 years. The tumor growth almost disappeared after one treatment by x-ray, but in September of the same year about one month later the eye was exposed and the patient went to the hospital for enucleation. Two more x-ray treatments were given. Report from the case in January, 1930, about five months later, physician reports that the lesion seems to be well.

GS—4015, 11-?-29. Old epithelioma under the eye. This patient has been under obesrvation and treatment since March, 1928. She was orginally referred by a dermatologist for fungating epithelioma under the right eye, arising on the base of an old syphilitic lesion. From March to August several x-ray treatments were given but the lesion did not heal, Electrocoagulation was then done followed by heavy doses of radium applied at a distance. In November, 1929, more than a year later, she was taken back to the hospital for further radium treatment. The lesion is not described at this time. The patient was then lost track of and has not been seen nor heard of since.

GJ—2575, 3- -28. Epithelioma of the Left Ear. This case was treated by x-ray prior and during February, 1927. The lesion never entirely healed. March 1928, over a year later, the pinna was excised with the cautery knife. Post operative x-ray was also given. The patient was reported as having no recurrence in Dec. 1928, nine months later.

GS—9- -27. Tumor in the right side of neck. The patient was given preoperative x-ray and the tumor was excised and a diagnosis of adenocarcinoma made. Post operative x-ray was also given. There was a recurrence and in Dec., 1927, preoperative x-ray was then given again in January, 1928, and the tumor again excised, radium being placed in the wound. Postoperative x-ray was also given. The patient died late in 1929.

SJ—18153, 11-26-29. This case came into the hospital with a provisional diagnosis of malignancy of the internal organs from a degenerated mole on the back. This was apparently an epithelioma of the scapular region and was apparently successfully removed with x-ray in 1928. At the time of admission to the hosital he had swollen forearms, with blister formation. One doctor said lungs, liver, muscles and abdominal organs were all involved. Another doctor's examination reported no tumors, tenderness or rigidity or the abdomen and lungs normal. The patient died in the hospital and no autopsy done. Therefore, there is some doubt about the diagnosis of metastatic malignancy.

SJ—16694. Carcinoma of the lower lip. In this case there was excision of the lip lesion and block dissection of the glands of the neck. There was subsequent x-ray treatment. What has become of patient and his cancer we are unable to say, some of it at least is doing him no harm.

SJ—15675, 5-12-29, Carcinoma of the lower lip. In this case there was a growth in the middle third of the lower lip infiltrating toward the chin. There was a v-shaped excision of the lip lesion with the electrotome and a block dissection of the cervical glands of the neck. There was postoperative x-ray given. That has been a year ago and it would be interesting to know the condition of the patient at this time.

SJ—17215, 7-25-29 and 12-12-29. Carcinoma of the lip, on lupus basis after injury. The lesion was removed by electrotome knife and electrocoagulation, the pathological diagnosis was squarmous cell carcinoma. This treatment was followed by x-ray but there was recurrence.

Note:—12-12-29. Caustic destruction in California has been used; edges were freshened and brought together. The patient is going back for other treatments with chemical caustics.

SJ—15060—12-8-28. Carcinoma of the foreskin. Excision of the foreskin with electrotome. Path. diagnosis equamous cell carcinoma.

SJ—17235, 7-8-29. Advanced Carcinoma of the hand. Amputation was done at the middle third of forearm. Pathological diagnosis was sq. cell carcinoma.

SJ—14571, 10-1-28. "Growth size of an egg." This growth was removed. We presume that it was removed from some part of the patient's anatomy, but the record is silent on this point. Pathological diagnosis, basal cell carcinoma.

SJ—14472, 9-18-28. Carcinoma of the labia. This patient gives a hostry of old infection of Bartholin's gland and vagina. The labia was thickened and there was much granulation tissue which was removed. Pathological diagnosis was squamos cell carcinoma. The subsequent history is not given.

SJ—3-30-29. Carcinoma of the tongue. In this case there was ligation of the external carotid and left lingual arteries. Radium was then placed around the lesion. At the second operation one-half of the tongue was amputatted with the cautery. Patient went out and about, one month later (4-4-29) came back on account of pain. About one month (5-18-29) later excision of recurrence was done and the wound was opened for x-ray therapy. The patient died in the summer.

GS—7234. Carcinoma of undescended Testicles. In Dec., 1924, an undescended testicle was removed at St. Joseph's hospital which was carcinomatous. It recurred in the groin in June, 1925, and was again removed and radium was applied in the wound, this was followed by x-ray. This healed and stayed healed until April, 1929, when the tumor again appeared in the groin. There was preoperative x-ray treatment and the patient was reported satisfactory in Aug., 1929. In Dec., 1929, the swelling again appeared and the lymph glands and scar tissue was removed. The pathological report did not show carcinomatous change. In May, 1929, a tumor was again removed and this time the pathological report showed alveolar carcinoma. In March, 1930, the patent went to consult Dr. Coffey. At that time there was much swelling in the leg and groin.

GS—6998. Carcinoma of the rectum. This cancer of the rectum was removed in June, 1927, by Dr. Murietta in Los Angeles with the Percy cautery. The case was referred in Oct., 1929, for radiation treatment for recurrence. She was referred to a surgeon for advice and recommendation. At operation only colostomy seemed possible. This was done and the patient referred again for radium and x-ray. Regular 20 mg. hrs. of x-ray at 190 kv. and 975 mg. hrs. of radium inside sinus connecting with the newgrowth in Nov. ,1929. Feb., 1930, patient reports that she is feeling well, gaining strength slowly, she has no special discomfort. The colostomy opening is functioning very satisfactorily.

PAGET'S DISEASE OF THE NIPPLE

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Carcinoma of the breast is one of the commonest forms of cancer. The number of types is large and most of them are extremely malignant. So much has already been written on the subject that there does not seem room for more. However, there is a rare form which has not been very well studied and on which the text books contain very little. Besides, what little information there is available is not very exact, so perhaps it will not be an unpardonable sin to discuss this type of tumor for a few moments. I refer to Paget's disease of the nipple. This was first described by Paget in 1874. How many cases he saw is not mentioned. It seems to be uncommon but perhaps there are many unrecognized cases. We recently have had one case and I can call to mind one other case, with tissue sent in for diagnosis. There was, more recently, two cases which were doubtful. We saw only the slides, which were poorly stained, so it was impossible to make a diagnosis. So far as I recall, all these cases but one were from Arizona.

Paget's disease usually attacks the nipple or adjacent regions but the same condition may occur on the skin of any portion of the body. Next to the nipple, the penis has been the region most frequently involved. The primary lesion is usually a sort of itching, eczematous condition which spreads very slowly and may be years before it gets large enough to be noticeable. There is usually some induration of the skin in the affected area and a definite tumor may develop. The location of this tumor is the most important condition in regard to the disease. It may be connected with the primary growth, in the breast beneath, in the axillary glands or in some remote part of the body in no way related to the primary growth. In this way it behaves like a sarcoma. The cause of the condition has never been determined and all authors are not agreed that the primary trouble is a new growth. Some have inclined towards infection. It usually appears between the ages of 40 and 60 and may be present ten years or more before serious trouble develops. There may be several types of cases as the conditions, described by different authors, do not all appear exactly alike. It is pretty well agreed that the characteristic cell is a large, rather pale staining cell with large vesiculated nucleus. Some authors state that it originates from the ducts of the gland wall within the nipple. Others consider it as originating in the skin cells and it is analagous to basal cell tumors in other places. Some authors mention the fact that there are a large number of plasma cells present. Other authors claim that the Paget cells originate in the prickle cell layer of the skin. One reason for all of this mixup is that no case has probably been studied early and changes have been going on for years before the case was seen. Until one has a chance to study some early cases, the true nature of the condition will probably never be unravelled.

There is not much to be found as to the course of the disease. If the condition is removed while it is still local, the chances for complete recovery ought to be good. After a definite cancer has developed, the condition is much more serious and, according to some authors, it is as hard to cure as any cancer.

Our first typical case was seen several years ago, and all we had was the specimen sent in for diagnosis. We never had any history of the case and never heard whether there were any recurrences or not. It was a typical case, simply involving the nipple.

We had a second case in which there was apparently some trouble with the nipple and the woman was sent to us for an examination. This showed nothing specially characteristic and the breast was removed and sent to us. It contained a very small area of cancer but not of the Paget disease type.

Our last case was seen recently in a very robust and healthy woman of about 70 years of age. She had an eczematous, warty condition above the nipple which had existed for some ten years (Fig. 1). This area was about thirty millimeters in its greatest diameter, brownish colored, distinctly raised from the rest of the skin, thickened and nodular, like an old keratosis. The skin beneath was somewhat indurated. There were no masses in the breast that could be felt. The axilla contained several enlarged glands of various sizes which were quite firm. A short time

ago one of these glands had been removed and sent to a tissue diagnostician for examination. He reported a rapidly growing, malignant tumor, the character of which was difficult to determine but was inclined to think it was a sarcoma. This case was operated on by Dr. W. L. Brown and the specimen was sent to the laboratory. The eczematous, nodular surface of the breast, near the nipple, was found as previously described. The breast was sectioned and no areas of suspected malignancy were found. The glands in the axilla were grossly malignant, being quite firm, greyish in color and rather friable. Microscopic examination of the areas in the skin show a variety of conditions. In one place, where there is not much thickening of the skin, we have an overgrowth of epithelium with finger-like processes projecting into the subcutaneous tissue and a good deal of keratinous deposit on the surface. In two places they are enclosed and form epitheliod pearls. In other places where the growth is thicker, these cells are invading the subcutaneous tissue. There is considerable reaction around them. In places, right in the skin, the cells take on the appearance of small round cells with relatively large, deep staining nuclei and have but little suggestion as being true epithelial cells. A section from the gland shows bands of fibrous stroma of varying density and scattered through this are dense masses of cells quite small, round or oval in shape, with the entire cell being made up of nucleus, which is dark staining. In other places, there are quite a number of large, pale cells with large vesiculated nuclei. In some places these are quite abundant and occasionally one has more than one nucleus. Mitotic figures are also present. In other places these cells are very scarce and can be seen scattered amongst the small round cells. The small round cells have no arrangement suggestive of lymphoid tissue though they may represent a violent reaction on the part of the body against the invasion of the new growth. However, if one did not know the history of the case, and saw the section by itself, he would be very much inclined to classify the condition as a lymphosarcoma and, as one studies the cells in the skin, he is not sure whether it originated there or whether they are a local product. A few eosinophiles are scattered throughout the section. Diagnosis is Paget's disease with metastases.

DISCUSSION

In studying the primary growth, one feels quite certain he has a typical epithelioma of the prickle cell type, but in the metastases there are no epithelioid pearls and no areas that even look like typical squamous cells. It will be noted that there were no tumors in the breast itself, but definite metastases in the axilla. I believe the condition to be a very slowly developing skin cancer and that the proper treatment for these cases is early excision with a wide margin of healthy skin. Physicians ought to be on watch for this condition for there are probably many cases that never develop cancer but if all of these eczematous conditions were treated early, the possibility of cancer developing later would be eliminated.

NON-TROPICAL SPRUE

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and
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So called non-tropical sprue is being more and more frequently reported in American medical journals. In the past this disease has been considered as essentially a tropical malady, patients usually giving a history of having at one time or another lived in the tropics or sub-tropics. As a matter of fact residence in such a climate was considered a necessary etiological factor in arriving at a correct diagnosis. This would now seem not to be essential, as quite a number of cases have been reported in which the patient has never been outside of the United States, many of them not even having visited our southern states.

The cause of sprue has not been definitely established. A number of theories have been advanced, briefly they are as follows:

The mycotic theory
The food deficiency theory
The helminthic theory
The bacterial theory
The climatic theory
The syndrome theory

The food theory as differentiated from the deficiency theory.

Perhaps the two most widely considered are the deficiency and the mycotic theories. Both have considerable merit, yet neither is puncture proof. Personally, we incline to the deficiency theory until further research proves it wrong. One of us having worked in the tropics for a period of ten years, has been greatly impressed with the results obtained in sprue cases following treatment with a balanced diet. The finding of fungi in the stools of patients suffering from sprue is supposedly characteristic, but also these same fungi are not infrequently observed in perfectly normal individuals. Castellani has observed the following fungi in cases of sprue:

Monilia albicans Robin
Monilia decolorans Castellani & Low
Monilla intestinalis Castellani
Monilia faecalis Castellani
Monilia insolita Castellani
Monilia tropicalis Castellani
Monilia enterica Castellani, probably synonymous, according to Castellani, with Monilia psilosis
Ashfordi and parasaccharomyces ashfordi Anderson.
Oidium rotundatum Castellani
Oidium asteroides Castellani

In Siam one of us cultivated the stools of a large series of patients from the out-patient department of the Central Hospital in Bangkok and had no difficulty in recovering many of the above listed monilias. Monilia psilosis was found to be a not uncommon inhabitant in patients quite free from sprue. We have been unable to produce spruce-like symptoms in monkeys fed on cultures of monilia psilosis. On the other hand McCarrison has reported lesions, comparable to the pathological findingsin sprue, in monkeys fed on a vitamin free diet.

PATHOLOGY

The principal pathological finding in cases of long standing is a marked thinning of the intestinal walls. The liver and spleen are reduced in size and the tissues in general will be found to be dehydrated. Although bile is secreted it is reduced in the intestine to a colorless substance, leucobilin. An excess of fat in the stools would indicate either a pancreatic lesion or an inability on the part of the intestines to absorb the same as a result of the destruction of the lacteal capillaries. Microscopically we find a destruction of the intestinal villi of the ileum from superficial ulceration. This is probably the end result of a primary congestion of the submucosa interfering with the blood supply. The drawing (Fig. 1) illustrates the principal pathological finding.

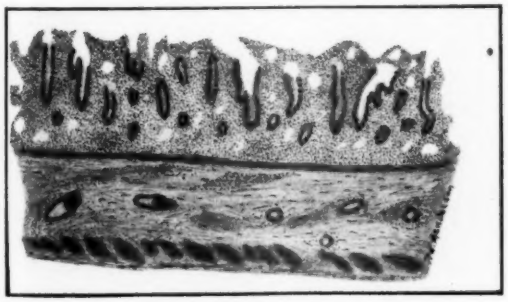

Fig. 1.

CASE HISTORY

Miss L., born in Frankfurt, Germany, in 1880 and came to the United States in 1891, has lived in New York City for 31 years. Childhood diseases include rickets, mumps, scarlet fever and whooping cough. In 1902 had appendix removed and was also diagnosed as having "ulcers of the stomach." In late 1902 was again operated upon for "stomach adhesions." Has had influenza several times since then, also tonsillitis. Otherwise well; average weight in past 20 years, 114 pounds.

From December, 1927, to March, 1928, suffered from a severe bronchitis. Tonsils were removed and was otherwise treated with autogenous vaccines, steam inhalations, colonic irrigations and bed rest for 12 weeks. Patient states she had recovered after two months. The following September she suffered an attack of influenza, cough, expectoration, chills and fever almost every other day. Temperature varied between 101 and 103. Treatment consisted of rest in bed, inhalations, autogenous vaccines and one transfusion. At this time first suffered from intestinal upset, stools loose, light in color, much flatus. Had lost in weight to 94 pounds. After three months allowed out of bed and sent to Albuquerque, New Mexico.

General condition upon arrival in Albuquerque fair. Appetite poor, cough continuous with moderate expectoration. Temperature varied between 100 and 103. Treatment consisted of rest in bed, vaccines, cod liver oil. Stereo of chest at this time revealed the following:

There was an obliteration of the right costo-phrenic angle. The lymphatics were thickened over the entire pulmonary area. There were several pea-sized areas surrounding the right hilum that suggested slight parenchymal thickening. There was also some slight parenchymal thickening of the extreme left base.

At this time the patient was referred to us by her physician as he did not think she was suffering from tuberculosis. The sputum examinations had been negative on several tests. Her weight at this time was 97 pounds and she was suffering from nausea and some vomiting. Stools loose, foamy, characteristically sprue-like. Gastro-intestinal x-ray examination was essentially negative. Blood count gave red cells 5,280,000, hemoglobin 83, white cells 11,600, differential, ploys 65, small lymphocytes 29 and large lymphocytes. A test meal at this time, after one hour, gave a total acidity of 4 and no free hydrochloric acid. The urine examination revealed a trace of albumen and many pus cells, otherwise negative. A blood calcium could not be done.

An interesting complication developed at this time in the form of a severe mycotic pruritus vulvae.

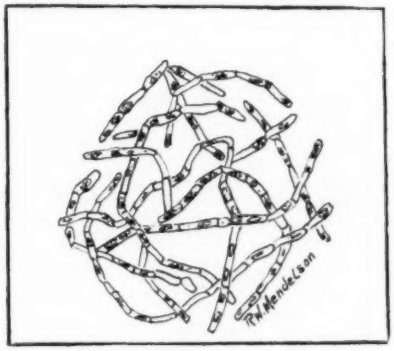

Fig. 2.

The illustration (Fig. 2) shows the fungus recovered from the lesions. This condition responded to

treatment. We rather feel that the infection may have been contracted from the stools. Unfortunately we did not have the necessary sugar media to identify the fungus recovered.

Our diagnosis at this time was putrid bronchitis and non-tropical sprue.

Treatment instituted for the bronchitis was purely symptomatic. We felt that if we could control the intestinal difficulty we could build up the patient's resistance and thus indirectly effect a cure of the bronchitis.

The patient's weight had gone down ot 93½ pounds. There was some swelling of the lower extremities and also some fluid in the abdomen. The cough was severe, the sputum considerable, but entirely negative for B. tuberculosis. The patient suffered from intestinal distention. The urine examination at this time was essentially normal.

An anti-sprue treatment was instituted. It consisted of a balanced diet, complete rest in bed, plenty of fluids and the following powder four times a day: Calcium lactate, gr. xv, with parathyroid gr. 1/10.: Improvement began shortly after this line of treatment was instituted. The bowel movements decreased in frequency, the color gradually returned, the nausea disappeared, the appetite increased and the edema gradually lessened. The above treatment was instituted in the early part of July, 1929. By the first of September the weight had increased to 110 pounds, the cough had disappeared, the appetite was good and the stools were practically normal. At the present time, June 23, 1930, the patieint weighs 116 pounds. She looks perfectly well and she states htat she feels quite normal. There is no intestinal trouble and no sign of any bronchitis. The gastric analysis, just completed, reveals a total acidity of 30 and a free hydrochloric acid of 20.

COMMENT

A case is presented symptomatically suggesting so-called non-tropical sprue. Therapeutically, it responds to the recognized treatment of such a disease. Although the patient did not suffer from the classical sore mouth and the blood picture was normal, we may diagnose the condition from the other symptoms, plus the characteristic gastric analysis and therapeutic results obtained. The blood picture may be accounted for by a change in residence on the part of the patient from sea level to an altitude of 5000 feet, the early treatment of the condition and a concentration of the blood as a result of the edema. Incidentally the patient stated that in September of 1928, when she first suffered from intestinal distress, she was given a blood transfusion on account of being anemic.

We feel that sprue is a deficiency disease possibly depending upon a parathyroid dysfunction. The intestinal flora in sprue we consider of secondary importance.

THE NEW MEXICO MEDICAL SOCIETY

FORTY-EIGHTH ANNUAL MEETING, AT RATON, NEW MEXICO, JUNE 4-6, 1930

June 4, 1930

The Forty-eighth Annual Session of the New Mexico Medical Society convened at Raton, N. M., June 4, 1930, this being the second meeting to be held in the northern section of the state.

Registration headquarters were established in the Hotel Swastika, where the business and scientific sessions were held on Wednesday, the opening day.

Meeting of the Council

Called to order by President-elect Dr. R. O. Brown (Santa Fe) at 9:30 a. m. There were present: Ex-officio members, Dr. R. O. Brown and Dr. L. B. Cohenour; Members, Dr. C. B. Elliott(Raton), Dr. W. T. Joyner, (Roswell), Dr. F. D. Vickers, (Deming), and Dr. M. K. Wylder, Albuquerque).

Motion was made by Dr. Joyner that Drs. F. D. Vickers and M. K. Wylder be appointed to act as members of the Council at this session in place of Dr. Carl Mulky (Albuquerque) and Dr. Dwight Allison (Las Cruces), absentees; seconded by Dr. C. B. Elliott and carried.

Financial report of the Treasurer was read by Dr. Cohenour, as follows:

Gentlemen: I hereby submit a report of the financial affairs of the New Mexico State Medical Society ending this date:

Balance on hand June 12, 1929	$1,080.00
Delinquent dues collected and dues collected for new members for 1929 (11 members)	55.00
Annual dues collected for 1930 from 214 members	1,070.00
Total cash on hand June 4, 1930	1,551.57

Disbursements:

Reporter for 1929 meeting (Balance half fee)	100.00
Secretary's salary for 1929	300.00
Southwestern Medicine for 218 members	436.00
10 members for 1929	20.00
Reporter for 1930 meeting (advance half fee)	100.00
Medical Directory for 1929	15.00
Treasurer's bond for 1929-1930	5.00
Dr. T. P. Martin (costs for medical meeting for 1929)	80.35
Lewis Printing Co., 350 programs for 1929 meeting at Taos, N. M.	28.00
Commercial Service Co.—repair typewriter	13.25
O. A. Matson Book Store (half pint glue)	.50
Southwestern Printing Co. (150 letterheads)	3.00
Southwestern Printing Co. (100 2c stamped envelopes)	4.50
Southwestern Printing Co. (300 2c stamped envelopes)	10.00
Total expenditures for 1920-1930	$1,215.60

Outstanding Indebtedness:

Southwestern Medicine dues for 214 members for 1930	428.00
Secretary's salary for 1929-1930	300.00
Reporter for 1930 meeting (balance of half fee	100.00
Medical Directory for 1930	15.00
Treasurer's bond for 1930-1931	5.00
Approximate total	$ 848.00
Expected balance after all bils are paid	$ 703.57

Respectfully submitted,
(Signed) L. B. Cohenour,
Secretary and Treasurer.

Motion was made by Dr. Wylder that the Treasurer's report be accepted as read; seconded by Dr. Joyner and carried.

Dr. L. B. Cohenour, secretary-treasurer, spoke of

the need for a new typewriting machine and requested authority to purchase same, exchange allowance to be obtained for the old machine traded in.

Dr. Joyner made motion that the secretary-treasurer be authorized to purchase such typewriting machine, after securing as large an exchange allowance for the old machine, as possible; seconded by Dr. Wylder and carried.

The secretary presented application of Dr. M. H. Thompson, Logan, N. M., for membership in the society.

Dr. Elliott made motion that Dr. Thompson be elected to membership after satisfactory approval by his reference, Dr. Dougherty; seconded by Dr. Wylder and carried.

Dr. Joyner stated that he believed steps should be taken to increase membership in the society, by securing as members-at-large those doctors who live and practice in sections where there is no component county society, and thought the secretary should have some forms of invitation printed, obtain a list of such men and send them invitations urging affiliation with the society, suggestng that such names might be secured by checking the membership list with names given in the Medical Directory.

The secretary presented a letter from the American Medical Association in regard to membership of Dr. Walter G. Hope, a former active member of the society. He stated that Dr. Hope was no longer able to practice on account of disability, that he had been elected an honorary member of fthe Bernalillo County Medical Society at Albuquerque, and desired to retain his membership with the American Medical Association, but before this could be done, it would be necessary for him to be elected an honorary member of the New Mexico Medical Society.

Motion was made by Dr. Wylder that Dr. Walter G. Hope be elected an honorary member of the New Mexico Medical Society; seconded by Dr. Joyner and carried.

Dr. Elliott spoke in regard to the registration assessment levied by the Colfax County Society at this meeting in order to help defray expenses of same.

Dr. Vickers made motion that the state society assume the costs of printing programs for the 1930 annual meeting; seconded by Dr. Wylder and carried.

Adjournment 10 a. m.

General Session

The meeting was formally opened at 10 a. m., the call to order being made by Dr. L. B. Cohenour (Albuquerque), secretary-treasurer, acting temporary chairman in the absene of the president, Dr. F. Crail (Las Vegas).

Invocation was delivered by Rev. Homer F. Cooke, pastor of the Christian Church, Raton:

"Oh Lord of Hosts and Thou who didst long ago stoop to touch Thine own finger to the pain wracked bodies of mankind, we know Thou art concerned in the affairs of this assemblage today. We thank Thee, Oh Lord our Father, for the advance human mind has made under Thy appurtenances. We thank Thee for the unconquerable advance of the medical profession. We thank Thee for these men and for the vast company of men of whom these are a few who consecrate their lives without stint or limit for the alleviation of human suffering. We thank Thee for their ideals, and now beseech Thee that they shall be guided by Thee during the sessions of this convention and that the pleasure and profit derived therefrom shall send them back to their homes with renewed vigor and greater inspiration for the tasks ahead of them. We ask it for Christ's sake, Amen."

Address of welcome, by Dr. A. R. Streicher, Mayor of Raton:

"Mr. President, Members of the New Mexico Medical Society and Visiting Physicians:

"In reviewing this little booklet which gives the program, I notice you are to have quite a number of papers to be read and discussed at this convention and presume there will be many references made to Exhibits A and B, or Specimens A and B. Behold here, Exhibit A, one who was actually cured and relieved of hay fever and asthma in this wonderful climate of Raton and vicinity. Graduating in Kansas City, we located in the Missouri Valley, 35 miles from Omaha. We found it low in altitude, but high in humidity, and thick with rag weeds, corn tassels and many other things. We found we only have two hands and with only two hands that is not enough for a dentist with asthma and hay fever to take care of his nose and look into the mouths of other people, so it seemed necessary to look around for another location. After much prospecting, we finally found the City of Raton, with its rarified air and lack of humidity, so we located here and never from that time have we been disappointed in this location where we were immediately relieved of asthma and gradually found relief from hay fever. When I say we were relieved of asthma immediately, I mean that in the six weeks before leaving the low altitude we had suffered for three or four weeks with intense spasms every night. The first night here the spasms ceased and the second night we lay down and slept the sleep of peace, and gentlemen, I want to say that was sure a grand and glorious feeling the next morning.

"Now for Exhibit B. My attention was called to the weather this morning when we assembled for the meeting of this convention, in comparison with that we had during the bankers' convention held here several weeks ago. My attention was called to the fact that as soon as the delegates to the bankers' convention began to arrive, it commenced to rain, became cold and the weather was disagreeable as long as the session lasted, the inference being that the condition was brought with them and is the same met with when you go to a bank to borrow money. Yesterday, as soon as the big, warm-hearted congenial physicians commenced to arrive, climatic conditions changed to the bright warm sunshine we have this morning and our weather is restored to its normal condition again.

"On behalf of the Colfax County Medical Society, and the citizens of Raton, I wish to extend a hearty welcome to you all. May your visit be a pleasant one, and your work most profitable, and may you enjoy yourselves thoroughly while here."

In the absence of Dr. F. F. Doepp, Carlsbad, Dr. F. D. Vickers (Deming) responded on behalf of the Society:

"I am sure that we fellows gathered here from all over the state are very glad to have such a perfectly delightful and charming place to which to come, where we can be cared for so pleasantly in your fine hotels. We are certainly very glad to be here, are greatly impressed with the beauty of your city and highly appreciate the hearty reception which has been accorded us. The mayor's reference in his address to the bankers' convention reminds me of a little story, the experience of a doctor friend of mine. Being in need of a loan, he consulted the president of a bank in his town, only to be refused, though his credentials were of the best. 'Could not think of it,' the banker said. At that the doctor changed the subject and asked 'Why, Mr. Banker! where did you get your glass eye?' It happened that the banker was very sensitive in regard to his eye condition. He had spent much time, energy and money to secure what he thought was an exact reproduction of the other eye and had

kept the matter an absolute secret, and consequently was much chagrined that the defect had been detected. 'How did you know,' he asked, 'Tell me and you will get the money.' To which the doctor replied, 'Well! I thought you looked a wee bit more sympathetic in that eye than in the other one.' "

Dr. Robert O. Brown (Santa Fe), the incoming president, was then introduced by Dr. Cohenour and delivered his presidential address. (See July issue).

Complimenting the doctors of New Mexico as a group of men meriting and receiving great respect as individuals in human society, and as a group among the larger group of physicians and surgeons of the United States for their professional ability, Dr. Brown pledged his sincere efforts to be of service to the society. He stated that only by a coherent and cohesive state society could the profession secure for themselves, the profession and for society at large in New Mexico, the things which were desired, such desires falling naturally in certain divisions: the physician's own legitimate economc desires; the desire to improve professionally, and the desire to render the greatest service possible to that society of which we are members. Ways listed in which the medical profession as a group can render service to the community besides the daily practice of their profession, included encouragement of the work of the Bureau of Public Health: aid and encouragement of the work of the State Bureau of Child Welfare and of the various local units of welfare work; education of legislators to the needs of these Bureaus, financial and legislative, and education of legislators to the need for adequate protection for the layman citizens of the state from the practitioners of the healing arts known not to e adequately educated in those arts.

Adjournment until 2 p. m., followed Dr. Brown's address.

House of Delegates

Meeting called to order at 1:30 p. m., by the president, Dr. R. O. Brown (Santa Fe). Present: Dr. L. B. Cohenour (Albuquerque), Dr. M. K. Wylder (Albuquerque), Dr. F. D. Vickers (Deming), Dr. R. J. Groom (Santa Rita), and Dr. C. F. Milligan (Clayton).

The secretary, Dr. L. B. Cohenour, presented and read his report, as follows:

Gentlemen: I hereby render a report of the affairs of the office of secretary-treasurer for the term ending with this session.

At the meeting held in Taos, N. M., June 12, 1929, there were several members suspended for non-payment of dues and immediately following were reinstated.

Members in the society at this time are as follows:

	1929	1930
Bernalillo County	42	45
Chaves County	19	19
Colfax County	17	15
Curry County	10	12
Dona Ana County	12	11
Eddy County	7	9
Grant County	12	16
San Miguel County	6	6
Luna County	7	6
McKinley County	13	11
Santa Fe County	21	17
Union County	11	9
Members at large	39	37
Total in good standing this date		214

One application for membership was received to be presented at this meeting. Since the 1929 meeting, a few members have left the state and a few are delinquent.

Two deaths of members of this society occurred this past year—that of Dr. F. E. Bird, Albuquerque, N. M., July 8, 1929, from apoplexy, and Dr. Miguel F. Des Marais, Las Vegas, N. M., July 19, 1929, from malignancy.

Respectfully submitted,
(Signed) L. B. Cohenour.

Dr. Groom made motion that the secretary's report be acepted as read· seconded by Dr. Wylder and carried.

The chair suggested that efforts be made to in- Drs. Vickers and Wylder, with instructions to report at the last meeting of the House of Delegates.

The minutes of the Council meeting held on the morning of June 4, 1930, were read and approved.

The chair suggested tha tefforts be made to increase the membership of the society by checking up the list of members with names appearing in the last Medical Directory and urging those doctors whose names appeared therein and who are not now members of the Society, to join either a component county society, if near one, or become a member at large.

Scientific Session

The afternoon session was opened with a paper by Dr. M. K. Wylder (Albuquerque) entitled "Preventive Medicine as Applied to Pediatrics." Dr. Wylder declared that prevention of disease and suffering is the primary function of our Health Departments, which could not exist were prevention taken out of their work; that pediatricians do and always have been taking the lead in preventive medicine. The principal diseases mention as being preventable were:

Rickets,—proper supervision of the mother's diet.

Cretinism, myxodema and muscular distrophies,—by giving iodine to expectant mothers;

Syphilis in infants,—by early and vigorous antiluetic treatment in known cases of syphilitic parents;

Smallpox,—by vaccination;

Diphtheria,—by use of T. A. T. or Toxoid.

Dr. Wylder spokke of the value of convalescent serums in connection with poliomyelitis, if given intraspinally; in measles when injected into the gluteal muscles; also in mumps, chickenpox and encephalitis lethargica. He stressed also the value of iodine in the prevention of goiter, the efficiency of typhoid vaccine and tetanus antitoxin.

Discussion was opened by Dr. F. M. Heller, Pueblo, Colo., who stated that our advance in longevity has come much through the efforts of the obstetrician because of prenatal care in saving the child; as to the problem of chorea and rheumatism in the child, much remains to be done if we expect a reduction of the mortality rate from heart disease, which is largely initiated in childhood.

Dr. F. D. Vickers (Deming asked Dr. Wylder to mention in his closing of the discussion the kind of tonsils that should be removed, if the stubs should be removed also, and if by so doing, would rheumatic fever be prevented?

Dr. J. M. Britton (El Paso, Texas) told of a case of chorea under his care in a child nine years old, with very large, hypertrophied tonsils, which the parents hesitated to have removed. They finally consented to a tonsillectomy, however, and the child was relieved immediately following same, with no trouble since, though that was over five years ago.

Dr. C. F. Milligan (Clayton) thought that more attention should be paid by the general practititioners to the mild cases, inasmuch as the majority of such cases did not come to the specialist, and yet if they were left without care, would soon go to seriousness.

Dr. A. B. Stewart (Raton) in speaking of the effect of heart disease in childhood, referred to Dr. Still of London, as perhaps the greatest authority

on this subject and recommended a recent book by Dr. Still on the subject.

Dr. J. R. Lemmon (Amarillo, Texas), thought that doctors as a whole, especially general practitioners, are not enough "sold" on the idea of preventive medicine and the sooner we are "sold" on this important part of medicine, the sooner we are going to be able to attain results and satisfy the laity. He believed unquestionably that tonsillectomy aids the average choreic child.

Dr. Wylder, in closing, thought Dr. Britton had answered fully Dr. Vickers' questions in regard to tonsils. He also referred to Still's work, but stated that Still does not advocate tonsillectomy as much as we do in this country, because he has said that a child should be sent to the seashore and on ocean trips before you take the tonsils out, which is certainly not done in this country. "In any unexplained diarrhea, look at the mastoid and the cause will be found and if you will puncture the ear drum the diarrhea will clear up."

Dr. Frank N. Allen, of the Mayo Clinic, Rochester, Minn., spoke on "The Treatment of Diabetes," citing the steady increase in the incidence of diabetes in that cases are now being reported more and more, and ascribing this to possibly better diagnosis. "Statistics for age groups show there has been a decided reduction in the deaths of children and young adults, but this has been offset by increases in deaths of older people from diabetes." He stressed the importance of the use of insulin in treatment of the disease and the immense advantages to be derived therefrom, quoting statistics as to the reduction of incidence of coma, which in 1924-25 reached 48 per cent of all cases whereas in the early part of 1929, it had fallen to 41 per cent and in a more recent series, to 37 per cent.

In the discussion, Dr. F. D. Vickers (Deming), told of difficulties encountered with some of his patients when put on a diet, the importance of which they could not or would not comprehend. He mentioned one case in particular where it became necessary to amputate a leg because no attention had been paid to dietetic instructions, stating that this procedure at least effected increasing respect for the prescribed diet.

Dr. R. J. Groom (Santa Rita) asked in regard to the management of diabetic cases with gastric upset.

Dr. F. M. Heller (Peublo, Colo.), cited a recent case in which the urine was sugar free, yet the blood was up very high and asked Dr. Allen to tell something about those cases in which the urine does not give any indication of the gravity of the situation.

Dr. R. O. Brown (Santa Fe) said he had one patient whose case bothered him considerably, because of showing sugar in the urine one day and the next day being sugar free.

Dr. Allen, in closing, explained that if sugar is found in the urine, it nearly always indicates diabetes, and the patient should be so advised and instucted to restrict his diet to such an extent as might be necessary to keep the urine sugar free. If the urine is free from sugar, and is kept free from sugar, one can be assured the patient will maintain good health and can be satisfied there is no immediate danger. While desirable, of course, to keep the blood sugar normal if possible, yet under ordinary circumstances if the urine is kept sugar free there is no danger and the urine test is dependable. One might subject a patient with a mild diabetes to a very strict diet and treatment with insulin in order to get the blood sugar normal and yet not make them feel any better or perhaps prolong their lives any more. The most serious thing is the development of acidosis. Any person with diabetes may develop acidosis if the condition is aggravated by complications, but acidosis will not occur if the urine is kept sugar free. Gastric disturbance may complicate ordinary dietary management, but one can plan a diet to suit any circumstance other than diabetes which might arise, and if necessary one may provide a patient with any sort of food which his system can tolerate. If necessary to use a more liberal allowance of carbohydrates, one can do so, making use of enough more insulin to keep the urine sugar free. One does not need to let dietary treatment of diabetes interfere with dietary treatment of other condiions.

Dr. Stuart Pritchard of the Battle Creek (Mich.) Sanitarium, presented a paper on "The Significance of Hemoptysis," of which he and Dr. J. K. M. Gordon were co-authors. The doctor felt that he was no stranger, he said, but rather one of the regular fellows, since this was his ninth visit before societies in the southwest. He reported the spitting or coughing of blood in greater or lesser quantities a frequently observed phenomenon, but that there are few symptoms which may have a more varied origin, and therefore it is important not to come to any hasty conclusion in the presence of hemotysis, whether scanty or profuse, temporary or constant, but rather endeavor to differentiate the actual underlying cause by a process of elimination.

The most prominent disease conditions which may have blood spitting symptoms were mentioned as: Lung disease,—with which probably nine-tenths of the cases of hemotysis are associated, and especially with pulmonary tuberculosis; Heart and vascular diseases; Conditions in the upper respiratory tract; Parasitic diseases. Miscellaneous causes,—such as purpura, scurvy, pernicious anemia, leukemia.

Treatment in nontuberculous pulmonary diseases depends upon the degree of hemoptysis and the nature of the underlying cause. Astringent and coagulating drugs may be used to control the bleeding adrenalin as an astringent being recommeded by some, hypophyseal medication, gelatinized serum, by others. In moderate hemorrhage, a hypodermic injection of morphine, gr. 1/6 to 1/4, with atropin, gr. 1/200 to 1/150 isa quick and most reliable remedy. When bleeding persists in spite of absolute bed rest with shoulders elevated so that expectoration may be accomplished with the least effort, surgical methods should be adopted at once, such as pneumothorax or phrenicotomy.

In announcing the opening of the discussion, Dr. R. O. Brown (Santa Fe) stated that in his opinion a history of blood spitting is a matter of great importance and that he always so considers it.

Dr. F. D. Vickers (Deming) voiced the belief that the physicians in the Southwest are prone to believe all cases of blood spitting to be from tuberculosis when very probably some are not.

Dr. J. M. Britton (El Paso) related that many patients apply at the office for treatment, stating they had just had a slight hemorrhage and think it came from the nose. However, he does not find one in one hundred cases, that comes from the nose or throat, and if such cases were watched, he believes they would turn out to be tuberculous.

Dr. R. J. Groom (Santa Rita) cited a very interesting case of a woman with tuberculosis, who at each menstrual period stayed in bed a number of days with cramps, nausea and vomiting, and lost as much weight at those times as she gained between periods. It was deemed advisable to bring about menopause by means of the x-ray, after which she became an arrested case. Two years after being pronounced arrested, she returned to her old home for a visit and while there began spitting up blood, and so returned west in a hurry. However, nothing was found by physical examination or x-ray to account for the bleeding. Twenty-

eight days after she repeated the process and for the following year and a half, it was repeated at similar intervals. It was never possible to locate a cavity or any chest findings whatsoever that would account for it.

Dr. F. M. Heller (Pueblo, Colo.), referred to a number of cases of mycotic infections, in which a blood-stained mycotic mucus was raised, also stating that many people come to Colorado for tuberculosis who have a mitral stenosis which is of the type of large heart on the left side, in most of which cases there is a blood-streaked sputum in the mornings.

Dr. A. J. Streit (Amarillo, Texas), stated that in Amarillo very few cases of tuberculosis are seen, but once in awhiile persons will come into the office complaining of spitting of blood. He recalled one or two cases with mild bleeding from the septum and from the turbinates, some from the tonsils and one case where it was from the upper part of the larnyx.

Dr. Pritchard had nothing to add by way of closing the discussion.

Dr. R. J. Groom (Santa Rita) spoke on "Vincent's Infection," which includes, he asserted, "more than Vincent's angina and is an inflammatory lesion due to infection by the Plaut-Vincent fusiform bacillus and spirochete. While usually a disease of the mouth, Vincent's organisms normally inhabit several other locations and can produce lesions in any of these areas. Characterized first by an inflammatory process, later by the formation of a pseudomembrane, in the still later stages they produce a sharply defined ulceration with a characteristic punched-out appearance. Dr. Groom named as the principal habitats of the fusiform bacilli:

1.That crypts of the palatine tonsil.
2. Tartar deposits on the teeth.
3. The smegma in the preputial sac and from about the clitoris.
4. And possibly in the intestinal tract.

Lesions produced are:

1. Oral Passages: Vincent's angina; noma; pharyngo-mycosis; pyorrhea alveolaris; ulcerative gingivitis, or trench-mouth.
2. Respiratory Tract: Pulmonary gangrene; pulmonary abscess (following tonsillectomy); pneumonia· perforating lesions of the trachea or bronchi; foreign bodies in the air passages, or other pulmonary infections.
3. Cerebral Lesions: Mestastatic putrid brain obscesses, complicating putrid bronchiectasis.
4. Ear: Mastoditis infection of the middle ear and sinuses.
5. Bone: Osteomyelitis of the inferior magilla.
6. Lymphoid Tissue: Enlargement of the cervical and mediostinal glands.
7. Blood: Infectious monocleosis.
8. Genito-Urinary: Gangrene alanitis.
9. Miscellaneous: Gangrenous infections of the fingers; cholecystiis.

Symptoms which vary with location of the infection and severity of the lesion are usually malaise and fever in acute cases, rapid pulse, loss of appetite, disturbance of digestion, severe pain in swallowing. The ulcerated surface bleeds easily. The involved area is inflamed and swollen; later becomes covered with a white or grey loose thin coating, thick pseudomembrane. white to reddish brown with peculiar offensive odor, enlarged lymph glands, gingivitis, balanitis, bronchiectasis and pyorrhea alveolaris.

The chief lesions to be differentiated are diphtheria, tuberculosis of the throat. acute tonsillitis, and septic sore throat. Interesting case reports were also given by Dr. Groom, the treatment recommended being sodium perborate, arsphenamines and bismuth.

Dr. M. K. Wylder (Albuquerque) in the discussion told of a case he had, a boy 12 years old, with typical Vincent's. With sodium perborate, the throat cleared up, but a few weeks later he developed post-diphtheritic neuritis.

Dr. A. J. Streit (Amarillo, Texas), said he considered any case very suspicious in which there had been a sore mouth for four or five days, and stressed the necessity for better hygienic conditions and cleanliness.

Dr. J. M. Britton (El Faso, Texas), stated he had encountered a lot of cases in his practice and that treatment with 10 per cent copper sulphate in nearly every instance afforded almost immediate relief.

Dr. J. R. Lemmon (Amarillo, Texas), told of a series of cases treated with normal salt solution, another with sodium perborate and another with arsphenamines, those treated with the normal salt solution recovering as soon as the other cases.

Dr. F. D. Vickers (Deming), referred to a dentist friend who treated many cases of trench mouth with perborate of soda, with much success.

Dr. Groom, in closing the discussion, stated there was still a question in his mind as to whether the cases are post-diphteritic neuritis or Vincent's acting the same way.

Adjournment.

SECOND DAY—JUNE 5, 1930

Morning Scientific Session

The session was called to order at 9 a. m., by the President, Dr. R. O. Brown (Santa Fe), the opening paper being by Dr. C. B. Francisco, Kansas City, Mo., on "The Management of Industrial Injuries."

The doctor referred to this as a "speed age," and as the practice of medicine has been caught in the demand for greater speed and perfection, we therefore as a profession should be aware of this demand. Industry demands that quicker results be obtained in the treatment of injuries with the minimum amount of resulting disabilty. Therefore the most important factor in speeding up end results in injuries is the prevention of infection.

In the management of lacerated wounds, first should come the welfare of the patient, which necessitates controlling of shock. Shock is the result of hemorrhage, cold and pain, either singly or combined. which agents must be controlled if shock is to be prevented. All of these conditions lower blood pressure and if pressure of the blood is allowed to remain under 70 for more than three or four hours, naught can be done to save the patient's life. When the factors that produce shock have been controlled, the wounds of the soft parts and of the bones should be considered. In severe cases an anesthetic should not be given; t he pain should be relieved by blocking the tissues with novocaine and the giving of morphine, then scrub the wounds vigorously and continuously for 15 or 20 minutes with soap and water. after which trim off all portions not showing evidence of ample circulation. The fracture, if one exists, should be approximated, the wound packed with sterile vaseline gauze, and a plaster cast applied to secure complete immobilization. The wound should not be disturbed for three or four weeks.

Dr. Francisco described methods of handling lacerated and contused wounds of the soft parts; lacerated wounds that extend into the joint surface; complete fractures of the upper third of the femur below the trochanter; fractures of both bones of the forearm in the lower third; simple fractures of both bones of the forearm in the lower third;

simple fractures of the tibia and fibula; fractures of the olecranon in the upper third; and comminuted fractures of the head of the humerus.

The next speaker, Dr. J. W. Hannett, Albuquerque, N. M., had as his subject, "The Treatment of Injuries in the Cranial Contents." The doctor declared that few will disagree that traumatism to the head requires closer observation and riper judgment than injury to any other anatomical region. With the exception of the manometer there is no instrument of precision to help us. The x-ray may or may not show a cranial injury, but it reveals or may not show a cranial injury, but it reveals nothing as to what has happened to the cranial contents. He described a number of cases under treatment, advising that the type of case to consider more fully is the one that is unconscious when first seen or wherein all of the grosser symptoms are increasing either rapand abolished reflexes that does not need a decompression. Conversely, an unconscious patient with a slow pulse rate, high blood pressure and increased manameter reading should be decompressed not only to prevent death from medullary compressions, but to avoid meningeal and certical changes should death not ensue. With careful observation these two types of cases should be differentiated. Dr. Hannet warned against complete reliance upon manometer readings, but concluded that many serious head injuries can be saved from death or serious sequelae by using modern methods of diagnosis with proper medical and surgical treatment.

The general subject of injuries was concluded by Dr. J. B. Hartwell, Colorado Springs, Colo., who spoke on "The Diagnosis and Treatment of Fractures of Transverse Processes of Lumbar Vertebrae." Dr. Hartwell cited a number of interesting case reports and summed up as his conclusions:

1. Fractures of the transverse process of the lumbar vertebrae are fairly common and industrial workers are especially liable to this injury. The injury is disabling.

2. Pain in the back is the only constant symptom.

3. Localized tenderness over the fracture site is the only constant sign.

4. Stereoscopic x-rays should be obtained in suspicious cases, but care is necessary in interpreting them.

5. Operative removal of the loose fragment is the treatment of choice because it shortens convalescence and because the end results seem certain and are good. If conservative treatment is chosen, operation should be advised in all patients whose back pain persists after ten weeks.

Dr. P. G. Cornish, Jr., (Albuquerque' who opened the discussion of the series of three papers, was particularly impressed with Dr. Francisco's conservative treatment in his fractures and his advocating the use of judgment and brains rather than a lot of mechanical appliances that are supposed to apply universally to all types of fractures. Dr. Hartwell's cases impressed him particularly from his radical treatment. In his own practice, he advocated treatment by conservative methods—rest in bed for varyying lengths of time, the getting them out of bed and on their feet again. In most cases they had been able to return to hard work in five to ten weeks.

Dr. W. L. Brown (El Paso), enjoyed all three papers, thought them very important, but for himself has not been able to subscribe to the method of leaving the compound fractures strictly alone, believing in temporary fixation. He told of a case seen, a policeman with a compound fracture of the leg. with terrific infection, the foot being greatly swollen and discolored, in which he suggested temporary fixation, but the attending physician demurred, stating he was afraid of possible criticism. Dr. Brown was willing to take whatever criticism might arise, so went ahead and as result of the fixation, in 24 hours there was marked improvement. Some eight or ten months later, a bone graft was done with perfect success.

Dr. A. E. Hertzler, Halstead, Kans., supported Dr. W. L. Brown's contentions as to the use of plates in compound fractures, stating that this method had been used by him for many years. and that in case grafting became necessary later, everything was in fine position for it, and that in many cases grafting is not necessary because the place has healed and one only has to take out the plate.

Dr. C. H. Churchill, Madrid, N. M., asked Dr. Francisco if there were any objections to using antiseptic solutions in hot applications for wounds, stating he was very much in favor of using hot moist applications and always keeps some kind of antiseptic solution on hand, and that he has never found any trouble arise from their use.

Dr. Crum Epler (Pueblo) expressed his appreciation of three papers, stating that during the war a class of bone setters developed who have carried on since; and also at that time there developed efficiency experts in all walks of life, and that he saw in these three papers, evidence of efficiency experts, or in other words, anatomical knowledge, pathological fact and good sound common sense. He referred to the fact that he and a few of those present, had practiced a long time before the advent of the x-ray, and set fractures then with good results so far as function was concerned—as good as at the present day, not always of course, but speaking generally. In industral work, the thing we are after is based strictly on the busness end of life, namely a result that has an economic value to the patient, makes him capable of having three-fourths or all of his function if possible and the remainder is to get him out at work as soon as possible. So far as antiseptics are concerned, he does not beleve much n antiseptics in these compound fractures. Cleanliness is most essential and cleanliness is next to godliness.

In closing the discussion, Dr. Franiscco emphasized one point—the giving of antitoxin. As to antiseptics he thought boric acid or some alkaline solution, as of distinct value.

Dr. Hannett stressed the effects of head injuries, so often overlooked because accompanied by other injuries, such as fractured pelvis, broken jaws, or injuries to the chest, and urged more thorough examinations.

Dr. Hartwell stressed the point that he was discussing uncomplicated types of cases and that cases subjected to his radical treatment for a period of from two to six years are free from pain, whereas other cases while perhaps possible to go back and take up the job in a shorter length of time, if followed over a period of months or years, would show more or less pain and distress.

The next speaker, Dr. O. H. Brown, Phoenix, Ariz., gave an extemporaneous talk on "Food Sensitizations and Their Treatment." He urged the importance and necessity of ascertaining the sources or objects of allergies and spoke on the type of food protein that produces asthma.

Discussion was opened by Dr. J. R. Van Atta (Albuquerque), who reported that in his hands no type of acid has seemed to help asthma in chronic cases, but he was delighted to hear that Dr. Brown is getting good results with diet and the use of some acid at meal time in early asthma.

Dr. J. R. Lemmon (Amarillo, Texas), referred to the infant as the best model of observation for food sensitization, observing the conditions following change of diet, thereby readily ascertaining those dishes causing gastric distress and colic.

Dr. M. K. Wylder (Albuquerque) said the subject was a most interesting one to him, as he had been a sufferer from hay fever for many years. He told of beneficial results ensuing from the use of lactic-acid milk for babies and asked Dr. Brown to state whether he has noticed any relation between protein sensitization and rheumatism, referring to Swift's recent work in which he brings forth the idea that a great many of inflammatory rheumatism cases are an allergic sensitization reaction, due to reaction from streptococcus.

Dr. R. H. Finney, Fueblo, Colo., stated he was very much interested in the subject and thought Dr. Brown deserved much praise for specializing in such work. Many of these cases come for help and relief after suffering for years and it is necessary for the doctor to treat, experiment and work them out, and in the end if he has accomplished wonders, he receives a fee perhaps of only a few dollars, yet has done something compared with the bone men, who put in a drill and receive a fee of $150, so men who work along these lines surely deserve a great deal of credit and praise.

Dr. F. D. Vickers, Deming, N. M., told of a case he had, wherein the patient suffered what seemed to be periodic attacks, with intestinal upset, fever, malaise, etc., which, when finally worked out was found to be due to eating fried chicken.

In closing the discussion, Dr. Brown in speaking of acids, thought hydrochloric the most essential, though dentists say it is hard on the teeth. Lactic acid in baby feedin is particularly important, and they have less eczema with that sort of diet. Allergy is a local reaction, while anaphylaxis is general. The doctor recalled a case of extremely severe eczema in a baker and suspected it was due to wheat. The baker was broken out from the top of his head to his feet. He was put on a dozen or more tests, among which was wheat, but did not react a particle. However, from the history of his having handled wheat all the time, he was told to lay off wheat and in a week he was practically well.

One day he went out and picked up an empty flour sack and in five or ten minutes was broken out all over with urticaria. He was told to be careful in regard to handling wheat and to be sure and eat rye bread, but one day came back again all broken out and finally admitted having used white flour. After a few weeks on a very carefully excluded diet, he became better and in five or six weeks the wheat tests were tried again, this time with reaction. Dr. Brown expressed the belief that the arthritis deformans type is a sensitization, probably more food than anything else and stated that if Dr. Wylder will put himself on large doses of acid, he may improve his hay fever. He mentioned the first case in which rheumatism was called to his attention, being that of a young woman whose physician had been giving her salicylates. . It was found that she had been eating citrous fruits, of which she was very fond, and when told to discontinue same, became well after three or four days. While getting the acid, she was probably not getting enough of protein. "In prescribing acid, I give it well diluted in a glass of water, to be sipped while eating. In foods like salads that have acid put on them ahead of time, this is a very good plan. One patient with a colitis, a tuberculous individual, always does better on a milk diet, but if he takes rawmilk, it makes his colitis worse. He improved very much after mixing acid with milk.

"One of the doctors said something about discouragements. I have worked on this subject for about twenty years and have had a great deal of discouragement, but the last few years have been very encouraging and we have achieved results through diets. Have the patient keep a diary of all the foods he eats. Have him note the results after breakfast, likewise after dinner and after supper. If he keeps this up over a number of weeks, he himself will see that every time he eats such and such a dish, his condition becomes worse. This, supplemented with a study of the case, should enable one to establish the source of infection and overcome it."

Adjournment for luncheon.

Meeting of House of Delegates

Meeting held at Hotel Swastika, called to order at 1 p. m. by the president, Dr. R. O. Brown (Santa Fe.)

Members present: Drs. Brown (Santa Fe); Cohenour (Albuquerque), Cornish, Jr. (Albuquerque); Wylder (Albuquerque); Groom (Santa Rita); Joyner (Roswell); Milligan (Clayton); Stewart (Raton); Vickers (Deming).

Election of officers was pronuonced in order, with candidates for offices of

President-elect: Dr. Wylder (Albuquerque) was nominated by Dr. Joyner; seconded by Dr. Vickers.

Dr. F. D. Vickers (Deming) was nominated by Dr. Wylder; seconded by Dr. Groom.

Motion was made, seconded and carried that nominations be closed.

Dr. Vickers stated that in view of the fact that it was very probable the next meeting would be held in Albuquerque, in his opinion it would be a great advantage to the society, if the president-elect were a resident of that city and he therefore requested that his name be withdrawn. The request was deemed out of order.

Vote by ballot resulted in: Dr. Wylder, 4; Dr. Vickers, 3.

Vice President: Dr. F. D. Vickers (Deming) was nominated by Dr. Wylder; seconded by Dr. Stewart. Dr. Milligan's motion that nominations be closed was seconded by Dr. Stewart and unanimously carried.

Secretary-Treasurer: Nomination of Dr. L. B. Cohenour (Albuquerque), present incumbent, was made by Dr. Groom, seconded by Dr. Cornish, Jr. Dr. Joyner's motion that nomination be closed was seconded by Dr. Wylder and unanimously carried.

Members of Council for Three Years: These to replace Dr. W. T. Joyner (Roswell), Dr. A. H. Miiller (Clovis), whose terms expired, and to fill unexpired term (one year) of Dr. Dwight Allison, (formerly Las Cruces), removed from state.

Motion of Dr. Wylder that Dr. Joyner and Dr. Miller be re-elected as members of the council for three years was seconded by Dr. Cornish, Jr., and unanimously carried, as also was motion that Dr. C. W. Gerber, Las Cruces, be elected to fill unexpired term of Dr. Allison.

Delegate to A. M. A. Meeting: Nomination of Dr. H. A. Miller (Clovis) was made by Dr. Groom, seconded by Dr. Vickers. Dr. Cornish, Jr. moved that nominations be closed, seconded by Dr. Stewart and unanimously carried.

Alternate to A. M. A. Meeting: Nomination of Dr. W. J. Latta (Wagon Mound), was made by Dr. Cornish, Jr., seconded by Dr. Vickers and unanimously carried.

Members of Board of Managers, Southwestern Medicine: Dr. F. G. Cornish, Jr. (Albuquerque) was nominated by Dr. Joyner.

Dr. A. B. Stewart (Raton) was nominated by Dr. Wylder. Motion that nominations be closed was made, seconded and unanimously carried.

Meeting place, 1931: Motion that Albuquerque, N. M. be the next meeting place was made by Dr. Vickers, seconded by Dr. Stewart, and carried without dissenting vote.

The president remarked that if the societyy as a whole desired action in a legislative way on a basic

science measure, it would be well to get busy before the start of the nominating convention. The subject was discussed generally in an informal way with result that motion was made by Dr. Joyner, seconded by Dr. Stewart and carried that the house of delegates recommend to the general session, the adoption of a basic science law, that the president be authorized to appoint a legislative committee of three members, and also that he be authorized to expend the sum of $500, if deemed necessary in his judgment, in this connection.

The annual registration of doctors in New Mexico was a topic brought up by Dr. Joyner for discussion, but owing to lack of time, no action was taken and adjournment followed at 1:30 p. m.

AFTERNOON SCIENTIFIC SESSION

Dr. A. E. Hertzler (Halstead, Kans.), requested permission to change the subject of his paper, which had been given out as "Diagnosis of Osteomyelitis," "Uterine Hemorrhage" and rendered a very interesting discourse thereon.

Dr. R. O. Brown (Santa Fe) stated that he had enjoyed Dr. Hertzler's talk immensely and was very glad to hear his stand as to the use of radium.

Dr. Crum Epler (Pueblo, Colo.) said that he was much interested in the subject but did not feel that he could intelligently discuss it.

Dr. P. T. Cornish, Jr., (Albuquerque), also expressed his appreciation of the paper, but did not believe he could add anything worthy of note.

Dr. James F. Percy, Los Angeles, Cal., spoke on "The Cautery Treatment of Carcinoma above the Clavicle," exhibiting stereoptican and motion pictures, to illustrate his work.

In the discussion Dr. O. H. Brown (Phoenix) stated that he had been one of a committee in Phoenix, delegated to review the literature on the suject of cancer and the feature most outstanding in all articles was the repeated warning not to transplant cancerous cells. That impressed him as one of the most important points in Dr. Percy's method when he first heard him lecture on the subject and he will make it a point when in Los Angeles to see Dr. Fercy at work.

Dr. W. L. Brown (El Paso) told of his interest in Dr. Percy's cautery work, which he has been following for a good many years, and praised his achievements, saying "The doctor has certainly shown a tremendous amount of enthusiasm and done some wonderful work with these apparently hopeless, helpless, agonizing cases, and I have a great respect for him and for his work.

Dr. P. G. Cornish. Jr., (Albuquerque) asked if in cases of the kind illustrated Dr. Percy depended on his dissection as much as he did on the heat, as it was rather a rapid dissection in which there could not be a great amount of dissemination of heat.

Dr. Crum Epler (Pueblo) stated that he had certainly enjoyed the exhibition and paper; that he, like Dr. W. L. Brown of El Paso, had followed Dr. Percy's work for a long time to some extent, though perhaps not so extensively as Dr. Brown and the impressive thing to him is the standardized belief that cancer, if it is curable, is curable only by enucleation early. The advantages of this method are due to heat and lack of hemorrhage, but it is well recognized that if you cure cancer, it must be done early and by enucleation.

Dr. A. E. Hertzler, (Halstead, Kans.), said he thought Dr. Percy was right. "Take particularly carcinomas that are approaching the skin. You think you are beyond, way beyond, inches beyond the infiltrations in the skin. You take cases of breast tumors where the skin is infiltrated; you take off the skin; you can section it and see the invaded cells and yet in a few months you will find little nodules in the skin beyond your line of incision. Now how in thunder do they get through? I know when you cut the skin with this cautery you do not have them. I have to concede that much. There is something that happens. Do they escape through the lymphatics? The cautery is of tremendous value and there is no question about it. I am not so convinced of the value of it in blocking out gland muscles in the neck. My experience in that regard has not been very good perhaps. I may not have timed it right, but that part I do not quite follow. As a matter of fact, after seeing these tremendously big operations which Dr. Percy has been showing, I believe after all a person has a certain obligations in supply ing golden rule, and for me, if I get a mass like one of these that has been shown, I hope Dr. Percy will shooot me and not use his cautery."

In closing the discussion, Dr. Percy stated that he was grateful for the comments, "that it has already been said we do not transplant cancer cells and as everybody knows this is not true in a cold steel knife operation. No man knows whether he has struck a little nest of cancer cells infecting the edge of his knife and has transplanted these cells everywhere else. But suppose you do have that following a knife operation; suppose the woman is going on to die. Don't think of that. Take my lead-pencil tip cautery, cover the woman's eyes, get that cautery hot enough so it will not hiss, put right on the mass and go through with it. I had a woman who was operated on with a cold steel knife. She came to me when she had a recurrence and I used the cautery. It is now twelve years since I treated her and she is still alive. We never know—we do not know anything about cancer. Cancer is a queer thing. The most hopeless cases we can sometimes help, and though we talk about the advantages of getting them early, I have had some of my worst results in some of my early cases and have had them coming in when they are stinking, bleeding, hemorrhaging all the time, and these people suffer a while and yet sometimes be alive five years or more afterwards. I was very glad one of the doctors brought up this question of rapid dissection. That is the fault of the camera. As a final word—do too much rather than not enough in the treatment of cancer."

Dr. F. E. Deemer, Denver, Colo., gave an extremely interesting talk on "Post-Operative Ateleltasis and Pneumonia," which aroused considerable discus- and Pneumonia," which arouse considerabe discussion and comment.

Dr. R. O. Brown (Santa Fe)„ stated that he liked the term "pneumonitis," but did not understand whether in these cases there is a sudden consolidation of a whole lobe or not.

Dr. F. M. Heller, Pueblo, Colo., expressed his enjoyment of the subject, but that speaking from the standpoint of x-ray diagnosis, Dr. Deemer was not taking any pathology of pneumonia that he understood.

Dr. C. Ernest, Pueblo, Colo., had the opinion that some of the cases no doubt showed other symptoms immediately after operation, stating that some are relieved alcost immediately after bronchoscopy and others equally quickly after operation; that it does not take a very hard operation to determine some of the various types and the thing to do is to examine the sinuses carefully before operation.

Dr. R. H. Finney, Pueblo, Colo., asked Dr. Deemer how he considers lobar pneuconia and what would be the cause of the blocking? "Take an acute infection,' he remarked, "a man working at his usual work becomes ill all of a sudden with lobar pneumonia, not post-operative, not with a cold, but with a bloodstream infection. He must consider

probably there is a plugging after the infection has taken place. Then this also brings up the subject of using carbon dioxid and then continuing the process throughout a day or two for twenty minutes at two to three hours intervals, which I expect is a very good procedure, as they are using that procedure in many of the surgical clinics to prevent the formation of this plugging."

Dr. Deemer in closing the discussion stated that there are a good many people who have seen the bronchoscope who figure that the strangling the patient gets from it does just as much good as the plug. They have a motor-driven suction apparatus like a tonsil machine, a suck out plug, but usually the patient coughs out the plug. "As to the benefits of carbon dioxid, it increases the breathing and cough reflex, allows the patients to breathe deeper and more rapidly and makes them cough more readily, and then, too, it is soluble to the tender mucosa. The lungs are a muscular organ. There are involuntary muscles in the lungs, from the trachea clear out toe alveolar. I want to bring out again and make it forcible that there is no such thing as post-operative pneumonia. Another thing I want to emphasize and that is anything that will stop the cough reflex, any narcotic, should be given with extreme care, post-operative. I always consider true lobar pneumonia as atelectatic at the beginning. There is a question up in literature as to whether or not primary pneumonia is not broncho. In a vast number of men, perhaps some 18,000 I looked at during the war, I found many hundreds of cases of either atelectasis or bronchopneumonia, who were walking around the camp and doing their duty. In some of the lobar pneumonitis cases you may have the crises on the third day, others not until the fifth day. There is a reason for it which should be figured out. What I wanted to bring out were the different types of atelectases and star every body thinking along those lines and perhaps help us all. While having had only 24 cases, I think, however. that is sufficient to cause a lot of comment. I have investigated cases of bronchopneumonia with atelectasis, in which there have never been indications of sinusitis."

Adjournment until 9 a. m., June 6, 1930.

GENERAL SESSION

A meeting of the General Session was held June 5, 1930, directly after the close of the Scientific Session, President R. O. Brown, Santa Fe, presiding.

After call to order, report of the House of Delegates was read by the secretary, Dr. Cohenour and motion that the report be approved as read was made, seconded and carried.

In regard to the recommendation that a Basic Scientific Law be urged, the president stated that it was the intention of the House of Delegates to submit the idea to the Society at its general meeting for its action; that it was not the desire of any one in the House of Delegates, or he himself to start anything that the Society might not want; personally he believes in a Basic Science Law and believes that such a law can be secured if it is gone about properly. Going about it properly means that there must be some interest taken by the Society and the County Societies in securing such a law. If a little preliminary work is done by the committee. the actual work will not be very heavy. However there is no use in starting anything in the legislature that the Society as a whole does not endorse or think is a good thing, or get something we might not want.

Dr. Stewart (Raton) suggested that the matter be discussed tomorrow at the General Session when there would probably be a larger attendance, as there might be a number of men present then who would want to express their views on the subject.

Dr. M. D. Gibbs (Roy) stated that he thought the laws of New Mexico could be improved and that it is to the interest of all members of the Society to see they are improved. The Basic Science Law, as he understands it, would require any one who is practicing the healing art to have a knowledge of anatomy and physiology, at least those two, and perhaps chemistry. That would be questionable, as some of the cults do not use medicine at all and they would get up the argument that they would have to learn chemistry which they would have no use for. There could, however, be no definite or reasonable argument that they should not have knowledge of at least anatomy and physiology. "These would be essential to my mind and my idea would be that the president instruct the members of the Society to as a committee of one in his home towne and county and in the interim before the election this fall get in touch with prospective candidates, ascertain their attitude and state we want them to work for a medical law if elected. Perhaps one or two medical might be elected and that would help."

Dr. Brown: That is my idea also of what should be done but I think we should talk it over at another time, since this meeting was considered more of a business session.

Dr. A. B. Stewart, Raton: "I make motion that an open discussion of the Basic Science Law be considered by the General Assembly tomorrow for a few minutes before adjournment." Seconded by Dr. Vickers and carried.

No further business coming before the meeting, adjournment followed.

Third Day—June 6, 1930
Morning Scientific Session

The session was called to order at 9 a. m., by the President, Dr. R. O. Brown (Santa Fe), the opening paper being by Dr. F. M. Heller, Pueblo Medical Group, Pueblo, Colo., on "Physiological and Clinical Aspects of Kidney Disease.' Dr. Heller carefully described the function of the kidney, advising that one or more of the following clinical signs are always present in kidney yesions:

1. Urinary findings.
2. Edema.
3. Blood pressure-hypertension.
4. Nitrogen retention—blood chemistry.
5. Ophthalmoscopic findings.
6. Uremic.

"The terms "nephorses, lipoid nephrosis, glomerulonephritis, benign and malignant sclerosis," were defined in detail and the importance of some of our present methods of clinical diagnosis of renal impairment, was stressed.

Dr. R. H. Finney, Pueblo, Colo., in opening the discussion, stated that there has been so much work done in past years in trying to work out classification in the kidney diseases, that it makes it most interesting in physiology. He thought the classification should be made as simple as possible and when it comes to making a diagnosis, he tries to bring it in one of three types:

"1. Degenerative nephritis, which is very broad, acute condition first, regardless of how it gets later. Some of them clear up, never to return again. In that case there is blood and very little else unless perhaps a little albumin. It may be from an acid inflammatory condition, scarlet fever or some streptococcus infection.

"2. Degenerative nephritis, which is very broad but takes in all degenerative conditions. In this, degenerative debris is found in urine but no blood, rarely red blood cells. It include Bright's disease of pregnancy and there are many others intermingled with this degenerative type. I usually call them degenerative nephritis and let it go at that.

"3. Aterio-sclerotic nephritis, in which some albumin, sometimes some little hypertension and arterio-sclerotic changes are found throughout the kidney. There are no red blood cells and no degenerative cells to amount to anything.

"These are the three types used by me in a diagnotistic standpoint."

Dr. J. F. Percy, Los Angeles, Cal., asked Dr. Heller if he had made any study in regard to the relationship of lipoidal nephritis to the so-called nephritis of Epstein, and whether or not these two conditions bear any relationship to each other, stating that he had published two papers in 1912 and 1913, in reference to the relationship of the thyroid to changes found in the kidney. "The only treatment for such cases is the administration of very large doses of thyroid extract. In my own mind, the nephritis of Epstein is nothing more or less than what has been mentioned under the general term of nephritis."

Dr. Heller (closing): In regard to the nephritis of Epstein, he classifies all nephroses together. To say that this case is lipoid nephritis, or just what kind is very difficult. Some of these cases become remarkably improved after treatment with thyroid extract, sometimes being discharged as well; other cases treated that way show no improvement. The interesting feature under study at the present time is to decide whether the process of nephroses is one in which pneumococcus is an attributing factor.

Dr. Donald G. Tollefson, Los Angeles, Cal., in an interesting paper entitled "Hysterectomy" reviewed his findings in an analysis of 604 cases, which he grouped into four divisions:

1. The preoperative status of the patient, including age incidence, marital state and pregnancies, symptoms and previous operations.
2. Operation—describing pathology, type, technic and associated pathology.
3. Postoperative complications and morbidity.
4. The immediate mortality and convalescence, with review of a follow-up system.

His conclusions were:

"Hysterectomy in all types of cases should not carry a mortality greater than 25 per cent. In some series of fibroids, it should be considerably less.

Even in the most careful aseptic technic, incidence of wound infection will be high because of the frequent existence of low-grade pelvic infection.

"Careful preoperative study and improving the general condition of the patient is more important than the rapid carefully executed hystectomy.

"Ovaries should be retained whenever doubtful diseases exist. The cervix should be cared for at the time of operation. Miscellaneous symptoms and palable tumors should not beindication for operatino."

Dr. W. J. Latta, Wagon Mound, N. M., stated that he perhaps saw the first hysterectomy that was successfully performed west of the Alleghany Mountains. "This was in 1874 and was performed by a doctor who had very little experience in these things, but the patient made an uneventful recovery and I remember I saw her forty years later and asked her as to the effect of the operation. She replied that it made such an enormous change in her general outlook that she would rather have died than not had the operation."

Dr. P. G. Cornish, Jr., Albuquerque, N. M., expressed his interest in the analysis of these hysterectomies, remarking that the mortality and morbidity is very low, and that to his mind the percentage of wound infections is probably due to infection in the cervix. Personally, he sees no particular advantage in leaving the cervix open and likes to get it closed as soon as possible.

Dr. Tollefson in closing the discussion stated that leaving the cervix exposed is probably one of the factors in wound infection; however, every attempt is made to keep anything threatening away from the cervix stump and we do not have very many on that account, but still have quite a few infections existing in the pelvis.

Dr. W. F. Martin, Battle Creek Sanitarium, Battle Crek, Mich., in a paper entitled "Some Urological Problems of Interest to the General Practitioner" emphasized the importance of the immediate recognition of urological symptoms, the accurate determination of their causes and an early therapeutic attack. He discussed hematuria, naming various diseases as a possible cause, but stressing the fact that in 80 per cent of all cases, tumor, stone and tuberculosis are the existing phases tumor taking first place as the most frequent cause and hematuria as the one urological symptom which should never be disregarded. Pain was next discussed, its causes and symptoms, but as a symptom in diseases of the urinary tract, this is in many cases very misleading, the doctor stated, and therefore responsible for many errors. When severe, it is demanding and impels the patient to seek immediate relief and medical aid, but unfortunately the lesions which cause the severe pain are the least imperative so far as the need for radical removal is concerned. The more serious lesions, as tubreculosis, neoplasm, etc., may develop insidiously for months to years with an entire absence of pain. Frequently major kidney diseases are accompanied by pain referred to remote parts and simulate diseases of other organis, particularly the abdominal viscera more often than to the so-called kidney area in the lumbar regicn. The distension of the renal pelvis and ureter with pyelographic mieda in making routine examinations will, as a rule, reproduce the patient's pain and thus implicate the kidney as a source of that pain, or serve as a strong evidence absolving the kidney in case the pain is not reproduced. Therefore it should be our rule to study the urinary organs in the presence of any pain, the cause of which cannot otherwise be positively proven.

The doctor also discussed dysfunctions of urination, prostatic problems, urinary tuberculosis, submucous ulcers of the bladder and residual urine, his conclusions being:

1. Remember the importance of giving the urinary tract a thorough study when making annual physical examinations of patients.
2. To make such a study includes more than the simple examination of the urine and palpation of the organs.
3. Symptoms are very unreliable and may be misleading and are not to be depended upon for a diagnosis.
4. While certain symptoms may be difficult to explain, the answer may be had by persistent and painstaking efforts.
5. Impending trouble discovered before it becomes imperative is more conservatively and successfully dealt with, than to wait until the condition becomes demanding.
6. One should always think of the urinary tract as a possible source of any pain which cannot be otherwise positvely explained.

Dr. Martin was followed by Dr. W. L. Brown of El Paso, Texas, who presented a "Potpourri," as he

(Contniued on page 450)

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THE SOUTHWESTERN MEETING

EL PASO, November 6, 7 and 8

It was hoped that completed program could be printed in this issue of the journal, but full details could not be obtained in time, and only general information regarding the speakers and subjects to be discussed are given below. Early in October a copy of the complete program will be mailed to all subscribers of this journal. Make your hotel reservations for the meeting, either through Dr. W. W. Waite, Roberts-Banner Bldg., El Paso, or direct to the Hotel Hussman.

FACULTY FOR THE CLINICAL CONFERENCE OF 1930.

Dr. Walter C. Alvarez, M. D. Cooper Medical College, San Francisco, 1905; Associate Professor of Clinical Medicine, University of Minnesota Medical School; Member, Association of American Physicians, American Gastro-Enterological Association, American Society for Clinical Investigation; Fellow of American College of Physicians.

Dr. Alvarez did his pioneer work on the physiology of the gastro-intestinal tract in San Francisco, this work attracting so much attention that he was offered important positions with the Mayo Foundation and the University of Minnesota Medical School, where he has been for several years. The subject of his clinical lecture will be "Practical Points in the Treatment of Gastro-Intestinal Disease;" he will present a new motion film of the stomach.

Dr. Willard Bartlett, M. D., Marion Sims College of Medicine, St. Louis, 1895; Assistant Professor of Clinical Surgery, Washington University, St. Louis; Member Southern Surgical Association; Western Surgical Association, Society of Clinical Surgery, Fellow American College of Surgeons.

Dr. Bartlett is a surgeon of international repute, and will speak on the subject of "Goitre," being a recognized authority on the thyroid gland.

Dr. Joseph Brennemann, M. D., Northwestern University, 1900; Member American Pediatric Society.

Dr. Brenneman stands high in the field of pediatrics, and is perhaps as well known for his work in the treatment of empyema in children as anything else. Dr. Brennemann will speak on two subjects in clinical lectures; "Acute Abdomen in the Child" and "The Treatment of Empyema in Children."

A clinical period will be arranged in which he will discuss the "Diagnosis of Tuberculosis in Children, with Special Reference to the Interpretation of X-ray Findings."

Dr. Jim Camp, M. D., University of Tennessee, 1900.

Selected as the representtaive of Western Texas for this program, Dr. Camp will present the subject of "Fractures as Seen by the General Practitioner."

Fractures constitute a subject of perennial interest, and since the great majority of them are seen and treated by the general practitioner or surgeon, this phase of the subject will be of particular interest.

Dr. M. Edward Davis, M. D., Rush Medical College, Chicago, 1923. Assistant Professor of Obstetrics and Gynecology, University of Chicago Medical School; Obstetrician and Gynecologist, Chicago Lying-in-Hospital

and the University Clinics; Fellow of the American College of Surgeons.

Dr. Davis is associated with Dr. DeLee, and will give a clinical address, as well as showing motion picture films illustrating difficult problems in obstetrics. These films attracted much attention at the Detroit meeting of the American Medical Association and are being shown by special request, for the first time in the Southwest.

Frank S. Dolley, M. D., Bowdoin Medical School, Portland, Me., 1911; Thoracic Surgeon for Good Hope Clinic and Cedars of Lebanon Clinic, Los Angeles; Fellow American College of Surgeons; Member American Society of Thoracic Surgery.

Dr. Dolley, after spending several years abroad in study and preparation for his specialty, located on the coast, where he confines his work to thoracic surgery. He will discuss "A Review of the Present Day Surgical Treatment of Diseases of the Chest."

Dr. Robert S. Flinn, M. D., Harvard University, 1927.

Dr. Flinn, the speaker selected to represent Arizona on the clinical program, has become known throughout Arizona for his work in metabolic diseases. He is a speaker of unusual clarity and force and presents his subject well. He will talk on the subject of "Diabetes."

Dr. George Herrmann, M. D., University of Michigan, 1916; Assistant Professor of Medicine, Tulane University; Managing Editor, American Journal of Syphilis; Member, American Society for Clinical Investigation, American Climatological and Clinical Association, American Association for Experimental Pathology.

Dr. Herrmann is an outstanding clinician and internist, particularly well known for his work on the heart. His clinical lectures will be on "The Diagnostic Criteria of Heart Disease," and "The Treatment of Syphilitic Aortic Disease in the Last Stages."

Dr. Allan Krause, M. D., Johns Hopkins University, 1907; Assistant Professor of Medicine, Johns Hopkins University Medical School; Member, American Society for Clinical Investigation; American Climatological and Clinical Association, American Association of Anatomists, American Association of Pathologists and Bacteriologists, American Society for Experimental Pathology, Society of American Bacteriologists.

Dr. Krause has recently moved from Baltimore to Arizona, assuming the directorship of the Desert Laboratory in Tucson. He is well known for his work in tuberculosis, particularly the pathology of the disease.

Dr. Philip H. Kreuscher, M. D., Northwestern University, Chicago, 1909; Clinical Professor of Surgery, Loyola University; Member Clinical Orthopedic Society; Fellow American College of Surgeons.

Dr. Kreuscher is a general surgeon better known for his work in the orthopedic branches. His lectures will be on "Fractures into Joints" and "Backache."

Dr. James M. Martin, M. D., Missouri College of Medicine, St. Louis, 1897; Professor of Radiology, Baylor University, Dallas; President Dallas Southern Clinical Society; Member, American Roentgen Ray Society, Radiological Society of North America, Fellow American College of Radiology.

Dr. Martin is well known for his pioneer and extensive work in radiotherapy. He will present the "Treatment of Accessible Malignancies," illustrated by lantern slides and motion pictures.

Dr. Alton Ochsner, M. D., Washington University School of Medicine, St. Louis, 1920; Professor of Surgery, Tulane University, New Orleans; Fellow American College of Surgeons.

Dr. Ochsner is one of the well known surgeons of America, and will discuss a subject of great interest,—"Acute Craniocerebral Injuries."

Dr. Leroy S. Peters, M. D., University of Illinois, 196; Fellow of American College of Physicians.

Dr. Peters was selected as the representative from New Mexico on this program. He needs no introduction to the profession of the southwest. He will discuss the "Cauterization of Adhesions—Jacobaeus-Unverricht Method."

Dr. William Spitzer, M. D., New York University Medical College, 1895; Fellow American College of Surgeons; Member American Urological Association.

Dr. Spitzer, of Denver, one of the well known urologists of the country, was selected by the program committee to represent this specialty, and will give a talk on "Pyelectasis (hydronephrosis) and Ureterectasis; Causes and Treatment."

Dr. Charles T. Sturgeon, M. D., University of Michigan, 1904; Assistant Professor of Surgery, College of Medical Evangelists, Loma Linda, Calif.; Fellow American College of Surgeons; Member Pacific Coast Surgical Association.

Dr. Sturgeon practiced in Arizona for many years and has many friends through the southwest; since locating on the coast he has built up an enviable reputation as a daring and original surgeon. He will talk on "Sodium Hmytal for the Preanesthetic Preparation of Surgical Cases."

Dr. Roy Thomas, M. D., Rush Medical College, 1907; Assistant Professor of Clinical Medicine, University of Southern California Medical School; Fellow American College of Physicians.

Dr. Thomas, who practiced for ten years in Phoenix, moving to Los Angeles following his period of service in the World War is well known through the southwest; he was president of the Arizona State Medical Association in 1916. He is one of the leading internists of the coast, having had charge of the pneumonia service of the Los Angeles General Hospital for several years. He will discuss the "Management of Lobar Pneumonia."

PROGRAM FEATURES
MEDICINE

"Practical Points in the Treatment of Gastro-Intestinal Disease." This will be discussed by Dr. Walter C. Alvarez, of the Mayo Foundation. He will also give a dry clinic on this subject, using lantern slides and a new motion picture showing the stomach, in physiological and pathological conditions.

"The Diagnostic Criteria of Heart Disease."

"The Treatment of Syphilitic Aortic Disease in the Last Stages." These subjects will be presented by Dr. George Herrmann, Assistant Professor of Medicine, Tulane University.

"The Management of Lobar Pneumonia."

This will be discussed by Dr. Roy Thomas Los Angeles, Assistant Professor of Clinical Medicine, Univresity of Southern California Medical School, Chief of Pneumonia Servic eof the Los Angeles General Hospital.

"Diabetes."

This will be discussed by Dr. Robert S. Flinn of Prescott, Arizona.

TUBERCULOSIS

"Cauterization of Adhesions—Jacobaeus-Unverricht Method."

This development in the use of pneumothorax, which is attracting increasing attention in the treatment of tuberculosis, will be discussed by Dr. Leroy S. Peters of Albuquerque, N. M.

"Diagnosis of Tuberculosis in Children."

This subject will be used by Dr. Joseph Brennemann of Chicago, in a clinic to be arranged by members of the Associatioin in El Paso. Special attention is to be given to the interpretation of the x-ray findings.

SURGERY

"Acute Craniocerebral Injuries."

This will be the subject of the lecture by Dr. Alton Ochsner, Professor of Surgery of Tulane University.

"Fractures Near Major Joints."
"Chronic Osteomyelitis."

These subjects will be discussed by Dr. Philip H. Kreuscher, Clinical Professor of Surgery, Loyola University, Chicago.

"Goitre."

This will be the subject to be discussed by Dr. Willard Bartlett, Assistant Professor of Clinical Surgery, Washington University, St. Louis.

"The Uses of Sodium Amytal in Surgery."

This will be discussed by Dr. Charles T. Sturgeon, of Los Angeles.

"Farctures as Seen by the General Practitioner."

This phase of the subject of surgery will be presented by Dr. Jim Camp, of Pecos, Texas.

"A Review of the Present Day Surgical Treatment of Diseases of the Chest." This will be discussed by Dr. Stephen S. Dolley, of Los Angeles.

OBSTETRICS AND GYNECOLOGY

These subjects will be presented by Dr. Edward N. Davis, Assistant Professor of Obstetrics and Gynecology, University of Chicago Medical School, who will use motion pictures as illustrations.

PEDIATRICS

"Acute Abdomen in the Child."
"The Treatment of Empyema in Children."

These subjects will be presented by Dr. Joseph Brennemann, of Winnetka, Ill.

UROLOGY

"Pyelectasis (Hydronephrosis) and Ureterectasis; Causes and Treatment."

This subject will be presented by Dr. William Spitzer, of Denver, Colo.

RADIOLOGY

"The Treatment of Accessible Malignancy."

This subject will be presented by Dr. James M. Martin, Professor of Radiology, Baylor University, Dallas, Texas, using slides and motion pictures.

EL PASO, TEXAS

Largest city in the Sunshine Spot of America; gateway to the scenic marvels of Arizona, New Mexico and West Texas; just across the border from Juarez, Mexico, El Paso is recognized as an ideal place to hold conventions.

Aeroplane View of El Paso

Convention visitors are assured of finding something to do or some place to go during their entire stay in El Paso. Many places of historic and scenic interest are to be found in El Paso or within a few hours drive from the city.

Where Spanish colonists once battled the desert and hostile Indians, there now stands a modern metropolitan city of more than 100,000 population. A city of modern office buildings, schools, churches, homes. Once desert land is now covered with the green verdure of well kept lawns. The desert has been pushed back from the Rio Grande's edge by irrigated farm lands..

Each year, the year round mild climate, with which the entire Scenic and Sunny Southwest is favored, attracts more and more tourists and home seekers to El Paso and its surrounding territory.

El Paso has become a manufacturing and wholesale distributing center. With transcontinental railways, highways and airways, it has become, likewise a distributing center for tourists. More and more are its attractions becoming known to the rest of the nation.

Rare, indeed, is the person who visits El Paso who finds his trip complete without a visit to Juarez, with the romantic glamor of its past and present ever before one.

Juarez, the largest city on the Mexican side of the border, has a population of approximately 35,000. There are no restrictions on American citizens visiting this foreign city with its old world Spanish atmosphere. Two international bridges that are open until midnight each day connect El Paso and Juarez. Street car and taxi service are available. There is also a sight-seeing bus to take the visitor over both El Paso and Juarez, or if he desires he may drive his own car across, providing he carries no baggage with him.

The cafes and cabarets of Juarez have an international reputation as places in which to wine and dine. The cafe district has been greatly extended during the last few years, due to the great increase in tourist travel to El Paso and Juarez.

The old rubs elbows with the new in this border town. Ancient adobe buildings are found side by side with buildings of modern construction.

Among the most interesting places that the tourist visits in Juarez, is Mission Nuestra Senora de Guadalupe, built, by Spanish priests in 1659. This mission is still in use. Near it is the jail and the city government buildings. The City market house is another place of great interest to visitors. Here one finds curios of all kinds, Mexican pottery, food stuffs, laces and handworked cloths of many kinds.

The Juarez Bull Ring is used at regular intervals to stage bull fights, the ancient

View in One of El Paso's Parks

sport of Spain. Thousands of tourists visit Juarez each year to see these bull fights.

In El Paso there are five uptown motion picture houses, all with talking picture equipment. One of these, which has just been completed, is one of the finest theaters in the southwest. El Paso also boasts of an excellent stock company that is now playing its second season in El Paso.

Two splendid golf courses are available for golfers. One is the 27-hole municipal course and the other, the 18-hole course at the El Paso Country Club.

Fort Bliss, the largest cavalry post in the United States, is located at El Paso. Monthly horse shows are held at the Fort. Once a year, a big horse show and polo tournament is staged. Under the auspices of the El Paso-Fort Bliss Polo-Horse Show association, El Pasoans who become members of the association are given riding instruction. Both civiliams and members of the service take part in the horse shows.

Many interesting side trips may be taken out of El Paso. To the east is the Carlsbad Cavern National Park. In this area is the largest underground cavern known to men. The caves are the most beautiful of any yet discovered. The government has lighted the trails with electricity and guides take visitors through the seven miles of caverns that have been opened to the public.

North from El Paso is the Ruidoso country, the Mescalero Apache Indian Reservation and Cloudcroft all in the pine clad mountains. The Ruidoso and Cloudcroft are summer resort sections and popular with El Pasoans.

Below Cloudcroft on the desert a few miles west of Alamogordo, N. Mex., are the White Gypsum Sands, covering 270 square miles in great snow white dunes. Good highways lead to all these places.

The convention visitor who has the time to make some of these side trips after the convention has ended will find them well worth his time. Complete information on what to see and where to go in El Paso and Juarez can be obtained at the tourist information bureau at the El Paso Chamber of Commerce.

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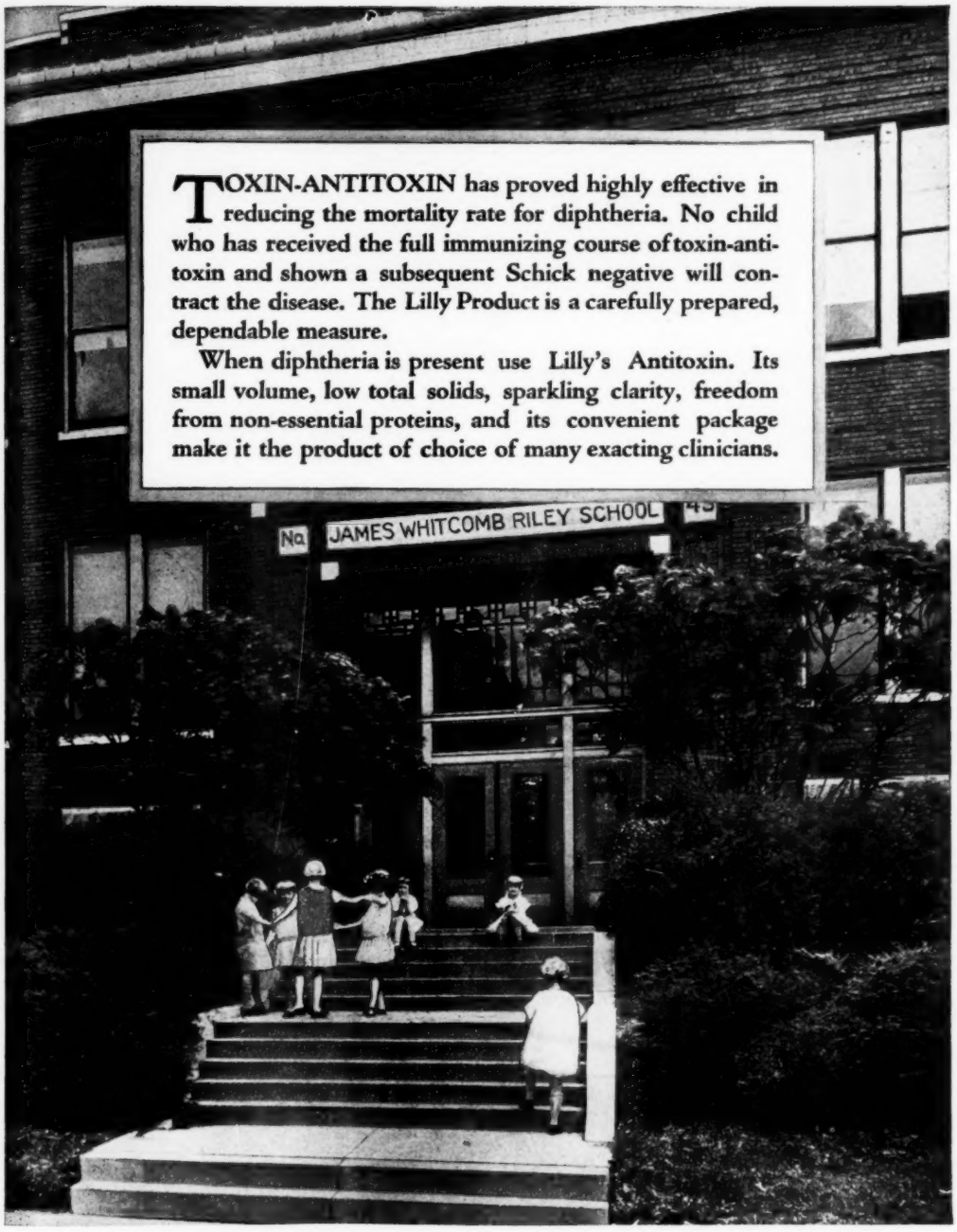

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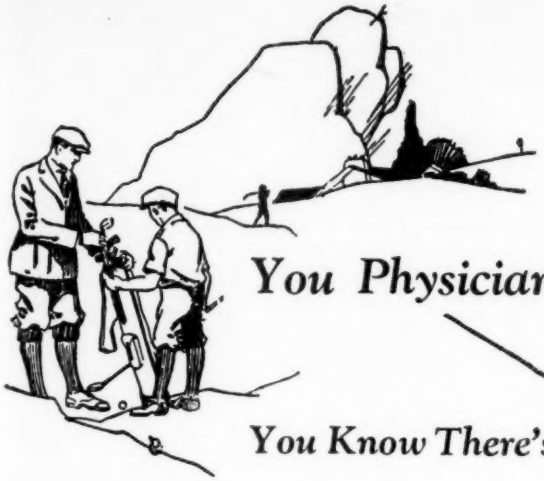

You Physicians Who Play Golf,

You Know There's a Club for Every Stroke

ALMOST any player can swing around the course with a single club, dubbing drives, lifting fairway sods and bringing home a century mark or more for the final score. But the finished golfer needs a club for every shot—a studied judgment of approach or putt before the club is selected.

Similarly in artificial infant feeding. For the normal infant, you prefer cow's milk dilutions. For the athreptic or vomiting baby, you choose lactic acid milk. When there is diarrhea or marasmus, you decide upon protein milk. In certain other situations, your judgment is evaporated milk.

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THE NEW MEXICO MEDICAL SOCIETY

(Continued from page 441)

termed it, prepared by Drs. W. L. and C. P. Brown. This consisted of practical points in:

A.—Exophthalmic Goitre—in which he advised that iodine should be reserved—first for the control not cure, of symptoms is exophthalmic goitre; second, that there is no harm in giving it to the already toxic adenoma, as occasionally there are mixed types and some benefit may be derived; third, it is often of value in the adolescent or endemic goitre below the age of 16 to 18 years. We are of the opinion that too small doses of iodine are given ordinarily; it will require ten minims of Lugol's solution three times a day to hold the symptoms in check, and during a crisis or for intensive preparation fifty to a hundred minims a day.

B.—Treatment of Serious Postoperative Abdominal Conditions—setting forth the benefits derived from the use of the duodenal tube for postoperative vomiting and distention.

C.—Osteo-Arthritis—in which reference was particularly made to "creaking knees," characterized by a moderate degree of soreness, giving away, temporary locking, swelling and pain after exercise, which symptoms usually are of long standing though they may occur in young athletes who have had injury to their knees. A great many of these cases are benefited and able to carry on a very normal existence even after the articular cartilages have been nearly destroyed by removal of the vegetations in the knee joint and loose or unloose bodies. This can only be accomplished by very liberal exposure of the entire knee joint, which is admirably accomplished by the incision of Fisher, which begins above and over the center the quadraceps tendon, three to four inches above the patella, comes down until the upper border of the patella is reached, then around to the inner side and back tothe center of the patellar tendon, and on to the attachment of the tendon to the tibia.

D.—Compression Fractures of the Vertebra—asserting that these may be caused by trivial accidents and often in the beginning have comparatively trivial symptoms. However, if they are not recognized, the disability progresses for months and months. As they are produced by hyperflexion of the spine, heavy objects falling on the head or by stiff-legged falls, a carefully taken history of the accident will often suggest an x-ray of the spine. Many of the cases go from the third to the sixth week, when it is found that the symptoms are gradually worse, at which time an x-ray is taken and a compression fracture is found. It should be absolutely routine in any spinal picture for trauma or otherwise that a two way picture be taken. After the fracture is diagnosed the patient should treated on his back on a convex bed for at least three months, and wear a well fitted weight supporting and hyperextension brace for a least a year. Cancellous bone does not heal and calcify as quickly as the harder bones, hence the deformity is inclined to increase under the body weight. Not only is the body weight taken off of the fracture, but extension is accomplished by simply putting comforts and blankets under the center part of the mattress.

In conclusion, Dr. Brown showed slides of six cases which he reported in 1925 under the title of "The Unrecognized Compression Fracture of the Vertebra," as illustrative of the late recognition these cases were getting at that time.

Dr. P. G. Cornish, Jr., Albuquerque, recalled the case of a man with complete ankylosis of the spine due to arthritis, stating that the man was struck on the back by a rock, and when brought to the hospital there were only a few abdominal pains and no other symptoms. These pains left within 24 hours and x-ray pictures at that time showed an old ankylosis of the spine; that a fracture of the body

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of the first lumbar vertebra had been missed, due to the fact no doubt that there were so many arthritic changes. That was in December; in May he was able to get around and about. He claimed he had paralysis of the bowels, which was chronic constipation. Our x-ray pictures at that time showed gradually increasing atrophy in the body of that verebra, in spite of the complete ankylosis of the spine. This was quite a lession to be extremely careful in the interpretation of x-ray pictures..

Dr. R. H. Finney, Pueblo, Colo., advised that he had seen the results of five cases of exophthalmic goitre operated under sodium amytal with very gratifying results, 15 grains given intravenously previous to operation, the patient sleeping from 12 to 24 hours after operation, with little excitement and apparently good results.

Dr. Brown in closing stated that the time has come when the orthoedic man has entered into the field of fracture; that general practitioners hesitate to tell a man he will have to stay in bed three or four or five months, which is often necessary and should be done. In regard to the use of sodium amytal, in exophthalmic goitre, I remember that in many cases where it was used, it was often very difficult to get up the mucus. That was our experience with a case at Taos last year, during the annual meeting. Right following that experience I went over to the AMA meeting and at one of the hospitals in Seattle they invited me to see a case operated on with amytal and they had the same difficulty there. I felt that it was too bad to go through that experiment again.

Dr. W. T. H. Baker, Pueblo Clinic, Pueblo, Colo., in presenting a paper on "Tumors of the Female Breast," stated that as yet no one has ever known why tumors of any sort start in the human body or why they start in some particular spot. We accept as being the dictum that new growths never start in sound tissues. We know that chronic irritations are factors, but this does not explain why in certain cases in which hthe source of irritation is very slight, new growths develop, while in others where the irritation is much more, they do not. The susceptibility of the individual here enters as being a most prominent factor. In no other way may we account for the fact that 90 per cent of the human race at present do not have cancer and that 10 per cent die from it. In making an examination, the patient is placed flat upon her backk with both hands under her head. Her chest should be absolutely bare. She should not be asked which breast is affected. The breast tissue must not be picked up, but palpated by the soft pads on the ends of the fingers with which both breasts should be gently rolled over the underlying thorax. Any swelling, nodule, or irregularity which is discoverable clinically will be at once felt. The object of this examination is to discover whether both breasts contain nodules, swellings or irregularities, whether the breast of which the patient complains be the only one affected, or whether there is more than one lesion. Having discovered swellings or irrigularities in both breasts or only in one, the next point to be decided is, can the skin covering the abnormal part be demonstrated to retract, which sign is best elicited by gradually and gently pushing the breat toward that part of the skin to be tested. If present, the slightest retraction of the skin covering the suspected area of swelling can be noted. Retraction of the skin induced by this precaution is one of the earliest and most constant of the classical and clinical signs of cancer.

Dr. Baker gave as his conclusions:

1. All practitioners of medicine should stress

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the importance of stated regular physical examinations.

2. In early diagnosis rests the secret of operative success in cancer of the breast.

3. The proportion of benign tumors of the female breast is greater than is generally quoted.

4. Removal of the breast with thorough cleaning out of all glands is often, but not always, justifiable in advanced cases.

5. Eventually a cancer cure will be found.

Dr. J. R. Van Atta, Albuquerque, in opening the discussion stated that it occurred to him the family history in these cases might be of importance. He recalled the case of a woman who came to him with an extremely bad cancer history, all of her sisters and aunts on her mother's side of the family having had cancer. "Her right breast was removed by an operation, but just exactly one hundred days from the first operation she returned complaining of pains in the opposite breast which was removed and proved carcinomatous. I felt chagrined that I had not elicited some evidence of the involvement of the other breast, since only one hundred days lapsed between the two operations. She came to me the first moment she discovered the nodule. She knew the value of early diagnosis. To me this was a case of apparently hereditary taint, so I consider the history is very important in these cases and believe a well taken history is as important as the physical examination."

Dr. R. O. Brown, Santa Fe, said that the case cited recalled Maude Slye's work in white mice, and it is a valuable lesson for every physician in the country to investigate the family history for cancer, especially when there is any suspicion of cancer in the breast, as beyond question there is a strong hereditary influnce.

In closing the discussion Dr. Baker urged that careful histories be taken, as this was a matter of utmost importance, especially since there is something in heredity.

The last number of the Scientific Session was a discourse by Dr. P. G. Cornish, Jr., Albuquerque, N. M., on "Intra-Pleural Pneumolysis' (with lantern slides) and "The Relation of Absorbable Sutures to Wound Healing."

Many compliments were paid Dr. Cornish on the excellence of the results shown in his series of cases, Dr. W. L. Brown, El Paso, stating that it is such a highly specialized technic that we ought to try as far as possible to refer these cases to one man instead of indiscriminately here and there, so that they can receive the benefits of an expert along these lines.

GENERAL SESSION

A meeting of the general session was held directly after the close of the Scientific Session, President Brown (Santa Fe), presiding. After call to order, the secretary's report, including a resume of the proceedings of the House of Delegates (which has been published in full in the minutes of the meeting), was read and adopted.

The Committee on Necrology submitted report as follows:

"RESOLVED, That the New Mexico Medical Society notes with regret the passing from this life of the following: Dr. F. E. Bird, Albuquerque and Dr. Miguel F. Des Marais of Las Vegas, the Secretary of this society is directed to convey to the members of the families of the deceased, our heartfelt sympathy and an assurance of respect in which their memory is held."

Report of the Committee on Resolutions was presented as follows:

"RESOLVED, That the New Mexico Medical Society in Forty-eighth Annual Session at Raton, N. M., June 4, 5, 6, 1930,extends sincere thanks for

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the hospitalities extended and courtesies shown its members and visitors by the Colfax County Medical Society, the City of Raton, El Raton Theatre, and the Swatiska Hotel."

Motion that the reports of the committees be adopted was made, seconded and unanimously carried.

President Brown, in closing the session, thanked the members of the Society for their attendance at the sessions, the interest taken and aid rendered him.

Adjournment sine die 1:30 p. m.

ABSTRACTS

Treatment of Acute Head Injuries. Antonio D. Young, M. D., F.A.C.P., Oklahoma City, Okla. Jour. of the Okla. State Med. Assn., June, 1930, p. 184.

The treatment of head injuries causes more anxiety than almost any other emergency of practice. Upon admission to the hospital, if shock is present, this is to be treated first. Immediate surgical treatment is usually necessary only for superficial hemorrhage or scalp laceration; all further surgery can wait until recovery from shock, when a more accurate diagnosis of the case can be made.

When the patient's condition warrants, x-rays of the skull should be made and a sufficient number of films to give details of the nature and site of the fractures, if any be present. Rarely has a patient ever died of a fractured skull; he dies because of hemorrhage, brain destruction or intracranial pressure. Every minute saved in beginning treatment of a severe case of head injury increases the chances of survival. Too often, valuable time is lost in waiting for unnecessary roentgenograms, while the patient's shock and intracranial pressure go unattended. The patient will survive or succumb independent of fractured skull, so early x-ray pictures are not necessary. Following recovery from shock the next essential step is to make the x-ray examination completely and thoroughly.

Radiation Treatment of Uterine Fibroids and Other Non-Malignant Uterine Hemorrhage. J. Donald MacRae, Jr., M.D., Asheville, N. C. Sou. Med. & Surg., June, 1930, p. 413.

These cases come first to the general practitioner, the surgeon or the gynecologist. The radiologist sees them only when they are referred to him; it is his duty, therefore, to inform his fellow practitioners about the type of cases he can help and what results are to be expected.

Uterine fibroids and non-malignant uterine hemorrhage from other causes are amenable to radiation therapy, when properly selected, in a very large percentage of cases. The necessity for accurate diagnosis before beginning treatment is emphasized. A diagnostic curettage should be done in all women over 40. The injection of lipiodol into the uterine cavity is a useful procedure in diagnosis. The chief indication for irradiation is uterine hemorrhage. There is need for balanced judgment as to the benefit offered by radiology or surgery. High voltage x-ray and radium have prac-

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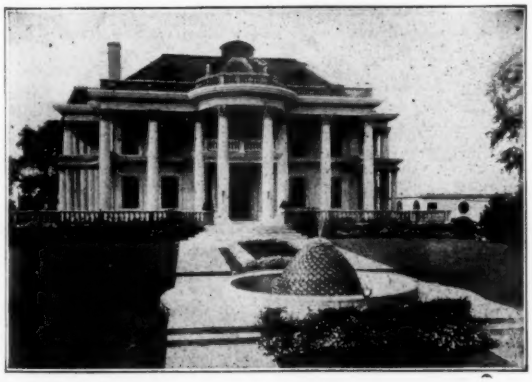

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tically the same effect on the tissues, and the reasons for choosing one or the other are based chiefly on the convenience of delivering the one or the other at the site of pathology or the organ to be treated.

X-ray and Radium Treatment in Cancer of the Cervix. W. M. Sheridan, A. B., M. D., Spartanburg, N. C. Sou. Med. & Surg., June, 1930, p. 411

In determining whether a woman has cancer of the cervix or not, bimanual examination, visual inspection of the cervix and biopsy should all be employed

Cancer confined to the cervix may be eradicated by x-rays and radium or by the Wertheim operation. Panhysterectomy should not be performed and when the disease has spread beyond the cervix the Wertheim is of no value.

Technic advised is to give deep x-ray therapy over lower abdomen and back, each side and perineum, at 200 k. v., .5 mm. copper filter 50 cm. distance, five ma.-hours over each area except perineum which receives half of this dose. After two weeks time any cauliflower mass which has not disappeared is destroyed by electrosurgery; radium is then applied by imbedding in the cervix and by application within the cervical and uterine cavities.

Lydin Not Acceptable for N. N. R.—The Council on Pharmacy and Chemistry reports that "Lydin," a product of the Harrower Laboratory Inc., is claimed to be "a physiological sex-stimulant of note," consisting of a combination of "the male sex hormone" with "the antisterility fat-soluble vitamin-E." It is marketed in capsules for oral administration and is recommended for use in the treatment of impotence with the suggestion that "the indications are too well known to be enumerated." The Council publishes a report on the biologic assay of "Lydin" by T. F. Gallagher sent to the Council by F. C. Koch, head of the Department of Physiological Chemistry and Pharmacology of the University of Chicago. This study shows that when administered by mouth "Lydin" is without effect as measured on capons by the comb growth method or on guinea-pigs as measured by the spermatozoa motility test. Brown-Sequard was convinced that an extract of the testes promoted the vitality, but his experiments were not confirmed or accepted. In the meantime, the available knowledge of the glands of internal secretion has aroused commercial promoters to the exploitation of all sorts of glandular extracts and combinations without an iota of evidence to show that any preparation of extracts of the testes, singly or in combination, has ever been shown to have the slightest effect on the human body when given by mouth. (Jour. A. M. A., July 19, 1930, p. 201.)

Testicular Grafting.—At the International Physiological Congress in Boston last summer, Voronoff boldly reported in relation to his widely proclaimed testicular grafting that the phenomenal results of the transplantation are now definitely established. Recently, Moore has discussed the astounding claims that are prevalent in this field and remarks that the absence of dependable indexes for the alleged "hypogonadism" in man, or the inability to utilize proved indicators for hormone introduction by any means, appears to have caused but little concern to clinicians employing these supposedly remedial measures. Astonishing as it may be, published statements of the effect of hormone introduction, or alleged hormone increases from the in-

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tact organs, claim improvements for conditions that fairly well exhaust the ills to which man has fallen heir. Moore concludes that there is no known acceptable evidence that non-viable testes grafts, that is, grafts that fail to become incorporated within the body and actively secrete, exert any immediate or remote beneficial effect on the host organism. (Jour. A. M. A., July 19, 1930, p. 203.)

The Vreelands Quackery. — Clayt Vreeland of Cleveland, Ohio, has for some years been defrauding the baldheaded. He did business under such trade names as "The Vreelands, Inc.," "The Vreelands," and "Vreeland." Finally the postal authorities got around to Mr. Vreeland and on June 24, 1930, the Postmaster General issued a fraud order debarring from the United States mails The Vreelands, Inc., The Vreeland, Vreeland, and their officers and agents. The business was the rather simple one of selling a preparation for the alleged growing of hair. The stuff was called "Hairerbs." It was found to be composed of glycerin and water with a trace of sage oil. (Jour. A. M. A., July 19, 1930 (p. 219.)

BOOK REVIEWS

Surgical Diseases of the Thyroid Gland, by E. M. Eberts, M. D., surgeon to the Montreal general hospital; associate Professor of Surgery, McGlil University, with the Assistance of R. R. Fitzgerald, M. D. and Philip G. Silver, M. D., illustrated with 48 engravings; Lea & Febiger, Philadelphia, 1929.

Clinical work can be made just as positively research as can laboratory work. The stage is set for one in clinical work and he must rightly recognize all the features of the setting. In laboratory experiment one arranges his own setting. Clinical research would then seem to be the more difficult and probably also the more important because it is made upon the human subject.

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